

# Sequence Listing

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 Gerritsen, Mary E.  
 Goddard, Audrey  
 Godowski, Paul J.  
 Grimaldi, J. Christopher  
 Gurney, Austin L.  
 Kljavin, Ivar J.  
 Napier, Mary A.  
 Pan, James  
 Paoni, Nicholas F.  
 Roy, Margaret Ann  
 Stewart, Timothy A.  
 Tumas, Daniel  
 Watanabe, Colin K.  
 Williams, P. Mickey  
 Wood, William I.  
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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe  
 50 55 60  
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn  
 65 70 75  
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala  
 80 85 90  
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn  
 95 100 105

Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu
				110					115					120
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln
				125					130					135
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe
				140					145					150
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile
				155					160					165
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly
				170					175					180
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly
				185					190					195
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu
				200					205					210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala
				215					220					225
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
				230					235					240
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln				
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<210> 7  
 <211> 1373  
 <212> DNA  
 <213> Homo sapiens

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 ctcttccct actccctctc ggctccttgt ggcccaaagg cctaaccggg 150  
 gtccggcggg ctggcctagg gatcttcccc gttgcccctt tggggcgagg 200  
 tggctgcgga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250  
 gggttcctgc gaggcccaga ctgggtccatc cccatcttgg actttgtgga 300  
 acagaaatgt gaagttaact gcaaaggagg gcatgtgata actccaggaa 350  
 gccagagacc ggtgatattt gtggcctgtg ttccccttgt ttttgatgat 400  
 gaagaagaaa gcaaattgac ctatacagag attcatcagg aatacaaaga 450  
 actagttaga aagctgttag aaggttacct caaagaaatt ggaattaatg 500  
 aagatcaatt tcaagaagca tgcatttctc ctcttgcaaa gaccataca 550  
 tcacaggcca ttttgcaacc tgtgttgga gcagaagatt ttactatctt 600  
 taaagcaatg atgggtccaga aaaacattga aatgcagctg caagccattc 650  
 gaataattca agagagaaat ggtgtattac ctgactgctt aaccgatggc 700

tctgatgtgg tcagtgcacct tgaacacgaa gagatgaaaa tcctgagggg 750  
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 ggaaaaaaca gttatcagag gctaaaacag aagagcccac agtgcattcc 850  
 agtgaagctg caataatgaa taattcccaa ggggatgggtg aacattttgc 900  
 acaccacccc tcagaagtta aaatgcattt tgctaatacag tcaatagaac 950  
 ctttgggaag aaaagtggaa aggtctgaaa cttcctccct cccacaaaaa 1000  
 ggctgaaga ttcttggtt agagcatgcg agcattgaag gaccaatagc 1050  
 aaacttatca gtacttgga cagaagaact tcggcaacga gaacactatc 1100  
 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150  
 aaacagatac aaaatatgga gcagaaagga aaaccactg gggaggtaga 1200  
 ggaaatgaca gagaaaccag aaatgacagc agaggagaag caaacattac 1250  
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300  
 taataattaa gaacaattta acaaaatgga agttcaaatt gtcttaaaaa 1350  
 taaattattt agtcttaca ctg 1373

<210> 8

<211> 367

<212> PRT

<213> Homo sapiens

<400> 8

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Ile	Ala	Gly	Phe	Leu	Arg	Gly	Pro	Asp	Trp	Ser	Ile	Pro	Ile	Leu	20	25	30	
Asp	Phe	Val	Glu	Gln	Lys	Cys	Glu	Val	Asn	Cys	Lys	Gly	Gly	His	35	40	45	
Val	Ile	Thr	Pro	Gly	Ser	Pro	Glu	Pro	Val	Ile	Leu	Val	Ala	Cys	50	55	60	
Val	Pro	Leu	Val	Phe	Asp	Asp	Glu	Glu	Glu	Ser	Lys	Leu	Thr	Tyr	65	70	75	
Thr	Glu	Ile	His	Gln	Glu	Tyr	Lys	Glu	Leu	Val	Glu	Lys	Leu	Leu	80	85	90	
Glu	Gly	Tyr	Leu	Lys	Glu	Ile	Gly	Ile	Asn	Glu	Asp	Gln	Phe	Gln	95	100	105	
Glu	Ala	Cys	Thr	Ser	Pro	Leu	Ala	Lys	Thr	His	Thr	Ser	Gln	Ala	110	115	120	
Ile	Leu	Gln	Pro	Val	Leu	Ala	Ala	Glu	Asp	Phe	Thr	Ile	Phe	Lys	125	130	135	
Ala	Met	Met	Val	Gln	Lys	Asn	Ile	Glu	Met	Gln	Leu	Gln	Ala	Ile	140	145	150	

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	
				155					160					165	
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	
				170					175					180	
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	
				185					190					195	
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	
				200					205					210	
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	
				215					220					225	
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	
				230					235					240	
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	
				245					250					255	
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	
				260					265					270	
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	
				275					280					285	
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr	
				290					295					300	
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met	
				305					310					315	
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr	
				320					325					330	
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu	
				335					340					345	
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	
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Lys	Glu	Glu	Val	Ile	Asn	Lys									
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<210> 9  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

<400> 9  
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 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150  
 tgcacttctc ctcttgcaaa gaccataca tcacaggcca tttttgcaac 200  
 ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggtccag 250  
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350  
 ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400  
 gaggaatatg accaggaa 418

<210> 10  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 10  
 ttgacctata cagagattca tc 22

<210> 11  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 11  
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<210> 12  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 12  
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<210> 13  
 <211> 2886  
 <212> DNA  
 <213> Homo sapiens

<400> 13  
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 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgtttctc 150  
 cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 200  
 acagtgcgtg agtcatcctg taatatgctc cttgtcaaca atgtatacat 250  
 tcttgctagg tgccatattc attgctttaa gctcaagtcg catcttacta 300  
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 cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450



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<210> 14  
 <211> 424  
 <212> PRT  
 <213> Homo sapiens

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 Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn  
 35 40 45  
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu  
 50 55 60  
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys  
 65 70 75  
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu  
 80 85 90  
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe  
 95 100 105  
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro  
 110 115 120

Ala Met Ala Val	Ile Phe Ser Asn Phe Ser	Ile Ile Thr Thr	Ala
	125	130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg Arg	Leu Asn Trp Ile	Gln
	140	145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu Ser	Ile Val Ala Leu	Thr
	155	160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn Leu	Ala Gly Arg Gly	Phe
	170	175	180
His His Asp Ala	Phe Phe Ser Pro Ser Asn	Ser Cys Leu Leu	Phe
	185	190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn Cys	Thr Ala Lys Glu	Trp
	200	205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr Thr	Ala Arg Val Phe	Ser
	215	220	225
His Ile Arg Leu	Gly Met Gly His Val Leu	Ile Ile Val Gln	Cys
	230	235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr Asn	Glu Lys Ile Leu	Lys
	245	250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile Phe	Ile Gln Asn Ser	Lys
	260	265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn Gly	Leu Thr Leu Gly	Leu
	275	280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys Asn	Cys Gly Phe Phe	Tyr
	290	295	300
Gly His Ser Ala	Phe Ser Val Ala Leu Ile	Phe Val Thr Ala	Phe
	305	310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu Lys	Phe Leu Asp Asn	Met
	320	325	330
Phe His Val Leu	Met Ala Gln Val Thr Thr	Val Ile Ile Thr	Thr
	335	340	345
Val Ser Val Leu	Val Phe Asp Phe Arg Pro	Ser Leu Glu Phe	Phe
	350	355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser Ile	Phe Ile Tyr Asn	Ala
	365	370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala Pro	Arg Gln Glu Arg	Ile
	380	385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu Arg	Ser Ser Gly Asp	Gly
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Glu Glu Leu Glu	Arg Leu Thr Lys Pro Lys	Ser Asp Glu Ser	Asp
	410	415	420
Glu Asp Thr Phe			

<210> 15  
<211> 755  
<212> DNA  
<213> Homo sapiens

<400> 15  
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ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 150  
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgtttctc 200  
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acagtgctgt agtcacctg taatatgctc cttgtcaaca atgtatacat 300  
tcctgctagg tgccatattc attgctttta gctcaagtcg catcttacta 350  
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400  
tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 450  
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500  
tcctggaagg aattctctga ttcatgaag tgggccattc ctgcctttct 550  
ttatttctctg gataacttga ttgtcttcta tgcctgtcc tatcttcaac 600  
cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650  
ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700  
cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750  
cttta 755

<210> 16  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 16  
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<210> 17  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 17  
tcagagaatt ccttccagga 20

<210> 18  
<211> 40  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtgtg agtcatcctg taatatgctc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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ggggcctgcg gggcagagga gcatcccgtc taccaggtcc caagcggcgt 150  
ggcccgcggg tcatggccaa aggagaaggc gccgagagcg gctccgcggc 200  
ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250  
tgaagaaaga accgaaaaag aagaaacaac agttgtctgt ttgcaacaag 300  
ctttgtatg cacttggggg agccccctac caggtgacgg gctgtgccct 350  
gggtttcttc cttcagatct acctattgga tgtggctcag gtgggccctt 400  
tctctgcctc catcatcctg tttgtgggcc gagcctggga tgccatcaca 450  
gacccccctg tgggcctctg catcagcaaa tccccctgga cctgcctggg 500  
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acttctcat ctggttcgtg cccgacttcc cacacggcca gacctattgg 600  
tacctgcttt tctattgcct ctttgaaaca atggtcacgt gtttccatgt 650  
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gattctgcca ccgcctatcg gatgactgtg gaagtgtggt gcacagtgt 750  
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cagaatctac tcctggccat catgtctctg gccactttaa ccattcccat 1200  
ctggcagtgg ttcttgacct ggtttggcaa gaagacagct gtatatgttg 1250

ggatctcatc agcagtgcc tttctcatct tggtagccct catggagagt 1300  
 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcagtgtggc 1350  
 agctgccttc ttactaccct ggtccatgct gcctgatgtc attgacgact 1400  
 tccatctgaa gcagccccac ttccatggaa ccgagcccat cttcttctcc 1450  
 ttctatgtct tcttcaccaa gtttgctctt ggagtgtcac tgggcatttc 1500  
 taccctcagt ctggactttg caggggtacca gacccgtggc tgctcgcagc 1550  
 cggaacgtgt caagtttaca ctgaacatgc tcgtgaccat ggctcccata 1600  
 gttctcatcc tgctgggcct gctgctcttc aaaatgtacc ccattgatga 1650  
 ggagaggcgg cggcagaata agaaggccct gcaggcactg agggacgagg 1700  
 ccagcagctc tggctgtctc gaaacagact ccacagagct ggctagcatc 1750  
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 gggatcagga cctgtctgcc ggcttgctga gcagctggac tgcaggtgct 1850  
 aggaaggga ctgaagactc aaggaggtgg cccaggacac ttgctgtgct 1900  
 cactgtgggg cgggtgctc tgtggcctcc tgctcccct ctgctgcct 1950  
 gtggggccaa gccctggggc tgccactgtg aatatgcaa ggactgatcg 2000  
 ggctagccc ggaacactaa tgtagaaacc tttttttac agagccta 2050  
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100  
 gtgagctatt aatgttatta attttcataa aagctggaaa gc 2142

<210> 20  
 <211> 458  
 <212> PRT  
 <213> Homo sapiens

<400> 20  
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 1 5 10 15  
 Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser  
 20 25 30  
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro  
 35 40 45  
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser  
 50 55 60  
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr  
 65 70 75  
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met  
 80 85 90  
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr  
 95 100 105

Glu	Arg	Asp	Ser	Ala	Thr	Ala	Tyr	Arg	Met	Thr	Val	Glu	Val	Leu
				110					115					120
Gly	Thr	Val	Leu	Gly	Thr	Ala	Ile	Gln	Gly	Gln	Ile	Val	Gly	Gln
				125					130					135
Ala	Asp	Thr	Pro	Cys	Phe	Gln	Asp	Phe	Asn	Ser	Ser	Thr	Val	Ala
				140					145					150
Ser	Gln	Ser	Ala	Asn	His	Thr	His	Gly	Thr	Thr	Ser	His	Arg	Glu
				155					160					165
Thr	Gln	Lys	Ala	Tyr	Leu	Leu	Ala	Ala	Gly	Val	Ile	Val	Cys	Ile
				170					175					180
Tyr	Ile	Ile	Cys	Ala	Val	Ile	Leu	Ile	Leu	Gly	Val	Arg	Glu	Gln
				185					190					195
Arg	Glu	Pro	Tyr	Glu	Ala	Gln	Gln	Ser	Glu	Pro	Ile	Ala	Tyr	Phe
				200					205					210
Arg	Gly	Leu	Arg	Leu	Val	Met	Ser	His	Gly	Pro	Tyr	Ile	Lys	Leu
				215					220					225
Ile	Thr	Gly	Phe	Leu	Phe	Thr	Ser	Leu	Ala	Phe	Met	Leu	Val	Glu
				230					235					240
Gly	Asn	Phe	Val	Leu	Phe	Cys	Thr	Tyr	Thr	Leu	Gly	Phe	Arg	Asn
				245					250					255
Glu	Phe	Gln	Asn	Leu	Leu	Leu	Ala	Ile	Met	Leu	Ser	Ala	Thr	Leu
				260					265					270
Thr	Ile	Pro	Ile	Trp	Gln	Trp	Phe	Leu	Thr	Arg	Phe	Gly	Lys	Lys
				275					280					285
Thr	Ala	Val	Tyr	Val	Gly	Ile	Ser	Ser	Ala	Val	Pro	Phe	Leu	Ile
				290					295					300
Leu	Val	Ala	Leu	Met	Glu	Ser	Asn	Leu	Ile	Ile	Thr	Tyr	Ala	Val
				305					310					315
Ala	Val	Ala	Ala	Gly	Ile	Ser	Val	Ala	Ala	Ala	Phe	Leu	Leu	Pro
				320					325					330
Trp	Ser	Met	Leu	Pro	Asp	Val	Ile	Asp	Asp	Phe	His	Leu	Lys	Gln
				335					340					345
Pro	His	Phe	His	Gly	Thr	Glu	Pro	Ile	Phe	Phe	Ser	Phe	Tyr	Val
				350					355					360
Phe	Phe	Thr	Lys	Phe	Ala	Ser	Gly	Val	Ser	Leu	Gly	Ile	Ser	Thr
				365					370					375
Leu	Ser	Leu	Asp	Phe	Ala	Gly	Tyr	Gln	Thr	Arg	Gly	Cys	Ser	Gln
				380					385					390
Pro	Glu	Arg	Val	Lys	Phe	Thr	Leu	Asn	Met	Leu	Val	Thr	Met	Ala
				395					400					405
Pro	Ile	Val	Leu	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Phe	Lys	Met	Tyr
				410					415					420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln  
425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp  
440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu  
455

<210> 21  
<211> 571  
<212> DNA  
<213> Homo sapiens

<400> 21  
gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50  
tatataatct gtgctgtcat cctgatcctg ggcggtcgagg agcagagaga 100  
accctatgaa gccagcagct ctgagccaat cgcctacttc cggggcctac 150  
ggctgggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200  
ttcacctcct tggctttcat gctgggtggag gggaactttg tcttgttttg 250  
cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctccctggcca 300  
tcatgtctct ggccacttta accattccca tctggcagtg gttcttgacc 350  
cggttttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400  
atttctcatc ttgggtggcc tcatggagag taacctcatc attacatatg 450  
cggtagctgt ggcagctggc atcagtgtgg cagctgcctt cttactaccc 500  
tgggtocatgc tgccctgatgt cattgacgac ttccatctga agcagcccca 550  
cttccatgga accgagccca t 571

<210> 22  
<211> 1173  
<212> DNA  
<213> Homo sapiens

<400> 22  
ggggcttcgg cgccagcggc cagcgctagt cggctctgga aggatttaca 50  
aaagggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100  
aaacagaaaa cctgttagaa atgtggtggt ttacagcaagg cctcagtttc 150  
cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200  
cattactgca gtaacactcc accatataga cccggcttta cttatatca 250  
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300  
aatattgogg cagttttatg cattgctacc atttatgttc gttataagca 350  
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400  
ctggccttgt acttggaata ctgagttggt taggactttc tattgtggca 450



aacttccaga aaacaaccct ttttctgca catgtaagtg gagctgtgct 500  
tacctttggg atgggctcat tatatatgtt tgttcagacc atcctttcct 550  
accaaagtca gcccaaatc catggcaaac aagtcttctg gatcagactg 600  
ttgttggtta tctggtgtgg agtaagtga cttagcatgc tgacttgctc 650  
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700  
attggaaccc cgaggacaaa gggtatgtgc ttcacatgat cactactgca 750  
gcagaatggg ctatgtcatt ttccttcttt gggtttttcc tgacttacat 800  
tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850  
taacctcta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900  
ctactttcca gagatatttg atgaaaggat aaaatatctt tgtaatgatt 950  
atgattctca gggattgggg aaaggttcac agaagttgct tattcttctc 1000  
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050  
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100  
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150  
gaaaataaag tcaaaagact atg 1173

<210> 23  
<211> 266  
<212> PRT  
<213> Homo sapiens

<400> 23  
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu  
1 5 10 15  
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala  
20 25 30  
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp  
35 40 45  
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu  
50 55 60  
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr  
65 70 75  
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys  
80 85 90  
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly  
95 100 105  
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala  
110 115 120  
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr  
125 130 135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile	
				140					145					150	
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp	
				155					160					165	
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu	
				170					175					180	
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp	
				185					190					195	
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala	
				200					205					210	
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr	
				215					220					225	
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn	
				230					235					240	
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn	
				245					250					255	
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile					
				260					265						

<210> 24  
 <211> 485  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 14, 484  
 <223> unknown base

<400> 24  
 cggacgcttg ggcngcgcca ggggccagcg ctagtcggtc tggtaagtgc 50  
 ctgatgcoga gttccgtctc tcgggtcttt tcctgggtccc aggcaaagcg 100  
 gagcggagat cctcaaacgg cctagtgttt cgcgcttccg gagaaaatca 150  
 gcggtctaata taattcctct ggtttgttga agcagttacc aagaatcttc 200  
 aaccctttcc cacaaaagct aattgagtag acgttcctgt tgagtacacg 250  
 ttctgttga tttacaaaag gtgcaggtat gagcaggtct gaagactaac 300  
 attttgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtggtttca 350  
 gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400  
 ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccgc 450  
 gctttacott atatcagtga cactgggtaca gtanc 485

<210> 25  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 25  
acctgttaga aatgtggtgg ttctagcaag gcctcagttt 40

<210> 26  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27  
<211> 1399  
<212> DNA  
<213> Homo sapiens

<400> 27  
cccacgcgtc cgcccgccgc tgcgtcccgc agtgcaagtg agcttctcgg 50  
ctgccccgcg ggccgggggtg cggagccgac atgcgccccgc ttctcggcct 100  
ccttctggtc ttgcgccggt gcaccttcgc cttgtacttg ctgtcgacgc 150  
gactgccccg cgggcgaggaga ctggggtcca ccgaggaggc tggaggcagg 200  
tcgctgtggt tcccctccga cctggcagag ctgcgggagc tctctgagg 250  
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300  
gcggcgccta cctctacaaa cagggtcttg ccatccccgc ctccagcttc 350  
ctgaatgttt tagctggtgc cttgtttggg ccatggcttg ggcttctgct 400  
gtgctgtgtg ttgacctcgg tgggtgccac atgctgttac ctgctctcca 450  
gtatttttgg caaacagttg gtggtgtcct actttcctga taaagtggcc 500  
ctgctgcaga gaaaggtgga ggagaacaga aacagcttgt ttttttctt 550  
attgtttttg agacttttcc ccatgacacc aaactgggtc ttgaacctct 600  
cgcccccaat tctgaacatt cccatcgtgc agttcttctt ctgagttctt 650  
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gtcaacccta acctctctgg atgctctttt ctctgggac actgtcttta 750  
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aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaata 850  
tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900  
ctggactcag ttgcttattt gtgtaatgga tgtggtcctc taaagcccct 950  
cattgttttt gattgccttc tataggtgat gtggacactg tgcataatg 1000

tgcagtgtct tttcagaaag gacactctgc tottgaaggt gtattacatc 1050  
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 agaaaatgct gtttgtggcc gggcgcggtg gctcacgcct gtaatcccag 1150  
 cactttggga ggccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200  
 agcctggcca agatggtgaa atcctgtctc taataaaaat acaaaaatta 1250  
 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300  
 gcaggagaat tgcttgaacc aaggtggcag aggttgcaat aagccaagat 1350  
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr	1	5	10	15
Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
				215					220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
				230					235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
				245					250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
				260										

<210> 29  
 <211> 1292  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
 ccgagggcggg agggagcccga gggggcgcgga gccccgcatg aatcattgta 50  
 gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100  
 ggttttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150  
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200  
 tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250  
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300  
 ctccagagacc cccccgcgag tatectctcc ttatagttgt gtataagggt 350  
 ctccgcaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400  
 ttccagccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450  
 gctcaactcat ccatacatt aggcctgatgt ccttgcccat tgccaagaag 500  
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550  
 accctttcca gactttgacc cctgggtggac aaacgactgt gagcagaatg 600  
 agtcagagcc cattcctgcc aactgcactg gctgtgccca gaaacacctg 650  
 aagggtgatgc tcctggaaga cgcgcccaagg aaatttgaga ggctccatcc 700  
 actggtgatc aagacgggaa agccccgtgt ggaggaagag attcagcatt 750  
 ttttgtgccg gtaccctgag ggcacagaag gcttctctga agggtttttc 800  
 gccaaagtgt ggcgtgctt tcctgagcgg tggttcccat ttctttatcc 850  
 atggaggaga cctctgaaca gatcacaat gttacgtgag ctttttctg 900  
 ttttactca cctgccattt ccaaaagatg cctctttaa caagtgtctc 950  
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000  
 cctatttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050  
 tccagtgccg aagacattgt cagtctgtgg ccattgccaat agagccaggg 1100  
 gatatcggct atgtcgacac caccactgg aaggtctacg ttatagccag 1150

aggggtccag cctttggtca tctgcgatgg aaccgctttc tcagaactgt 1200  
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccagggtt 1250  
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30  
 <211> 347  
 <212> PRT  
 <213> Homo sapiens

<400> 30  
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser  
 1 5 10 15  
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met  
 20 25 30  
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys  
 35 40 45  
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val  
 50 55 60  
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala  
 65 70 75  
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val  
 80 85 90  
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg  
 95 100 105  
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys  
 110 115 120  
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp  
 125 130 135  
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu  
 140 145 150  
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys  
 155 160 165  
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His  
 170 175 180  
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile  
 185 190 195  
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser  
 200 205 210  
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp  
 215 220 225  
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln  
 230 235 240  
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro  
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Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro
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Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile
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Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
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 <212> DNA  
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GenBank accession number: F01481.1

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 <212> PRT  
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 35 40 45  
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu  
 50 55 60  
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His  
 65 70 75  
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala  
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 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg  
 95 100 105  
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys  
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 140 145 150  
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr  
 155 160 165  
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu  
 170 175 180  
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln  
 185 190 195  
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val  
 200 205 210  
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val  
 215 220 225  
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly  
 230 235 240  
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val  
 245 250 255  
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe  
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Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	
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Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	
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Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	
				335					340					345	
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	
				350					355					360	
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	
				365					370					375	
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	
				380					385					390	
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	
				395					400					405	
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	
				410					415					420	
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	
				425					430					435	
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	
				440					445					450	
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	
				455					460					465	
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	
				470					475					480	
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	
				485					490					495	
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	
				500					505					510	
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	
				515					520					525	
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	
				530					535					540	
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	
				545					550					555	
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	
				560					565					570	
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	
				575					580					585	

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys
				590					595					600
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln
				605					610					615
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala
				620					625					630
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe
				635					640					645
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val
				650					655					660
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp
				665					670					675
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met
				680					685					690
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro
				695					700					705
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly
				710					715					720
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val
				725					730					735
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His
				740					745					750
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr
				755					760					765
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu
				770					775					780
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val
				785					790					795
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile
				800					805					810
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr
				815					820					825
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu
				830					835					840
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala
				845					850					855
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu
				860					865					870
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val
				875					880					885
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr
				890					895					900

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln
				905					910					915
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala
				920					925					930
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr
				935					940					945
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu
				950					955					960
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln
				965					970					975
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val
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<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<210> 35

<211> 1395

<212> DNA

<213> Homo sapiens

<400> 35

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly  
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 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val  
 65 70 75  
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro  
 80 85 90  
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr  
 95 100 105  
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu  
 110 115 120  
 Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His  
 125 130 135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys
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Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe
				155					160					165
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn
				170					175					180
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn
				185					190					195
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu
				200					205					210
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser
				215					220					225
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe
				230					235					240
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser
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Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe
				260					265					270
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu
				275					280					285
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys
				290					295					300
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp
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<220>  
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<210> 38  
 <211> 24  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 38  
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<210> 39  
 <211> 50

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<210> 40  
<211> 1365  
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<400> 40  
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<210> 41  
 <211> 566  
 <212> PRT  
 <213> Homo sapiens

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                   20                  25                  30  
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val  
                   35                  40                  45  
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr  
                   50                  55                  60  
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile  
                   65                  70                  75  
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp  
                   80                  85                  90  
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn  
                   95                  100                 105  
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys  
                  110                 115                 120  
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg  
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 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly  
                  140                 145                 150  
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val  
                  155                 160                 165  
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg  
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 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly  
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 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser  
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Ser	Phe	Glu	Tyr	Asp	Leu	Arg	Leu	Val	Leu	Tyr	Gln	His	Trp	Ser					
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Leu	His	Asp	Ser	Leu	Cys	Asn	Thr	Ser	Tyr	Thr	Ala	Ala	Arg	Phe					
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Lys	Leu	Trp	Ser	Val	His	Gly	Gln	Lys	Arg	Leu	Gln	Glu	Phe	Leu					
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Ala	Asp	Met	Gly	Leu	Pro	Leu	Lys	Gln	Val	Lys	Gln	Lys	Phe	Gln					
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Ala	Met	Asp	Ile	Ser	Leu	Lys	Glu	Asn	Leu	Arg	Glu	Met	Ile	Glu					
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Glu	Ser	Ala	Asn	Lys	Phe	Gly	Met	Lys	Asp	Met	Arg	Val	Gln	Thr					
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Phe	Ser	Ile	His	Phe	Gly	Phe	Lys	His	Lys	Phe	Leu	Ala	Ser	Asp					
				365					370					375					
Val	Val	Phe	Ala	Thr	Met	Ser	Leu	Met	Glu	Ser	Pro	Glu	Lys	Asp					
				380					385					390					
Gly	Ser	Gly	Thr	Asp	His	Phe	Ile	Gln	Ala	Leu	Asp	Ser	Leu	Ser					
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Arg	Ser	Asn	Leu	Asp	Lys	Leu	Tyr	His	Gly	Leu	Glu	Leu	Ala	Lys					
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Lys	Gln	Leu	Arg	Ala	Thr	Gln	Gln	Thr	Ile	Ala	Ser	Cys	Leu	Cys					
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Thr	Asn	Leu	Val	Ile	Ser	Gln	Gly	Pro	Phe	Leu	Tyr	Cys	Ser	Leu					
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Met	Glu	Gly	Thr	Pro	Asp	Val	Met	Leu	Phe	Ser	Arg	Pro	Ala	Ser					
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Leu	Ser	Leu	Leu	Ser	Lys	His	Leu	Leu	Lys	Ser	Phe	Val	Cys	Ser					
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Thr	Lys	Asn	Arg	Arg	Cys	Lys	Leu	Leu	Pro	Leu	Val	Met	Ala	Ala					
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Pro	Leu	Ser	Met	Glu	His	Gly	Thr	Val	Thr	Val	Val	Gly	Ile	Pro					
				500					505					510					
Pro	Glu	Thr	Asp	Ser	Ser	Asp	Arg	Lys	Asn	Phe	Phe	Gly	Arg	Ala					
				515					520					525					
Phe	Glu	Lys	Ala	Ala	Glu	Ser	Thr	Ser	Ser	Arg	Met	Leu	His	Asn					
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His	Phe	Asp	Leu	Ser	Val	Ile	Glu	Leu	Lys	Ala	Glu	Asp	Arg	Ser					
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Lys	Phe	Leu	Asp	Ala	Leu	Ile	Ser	Leu	Leu	Ser									

<210> 42  
 <211> 380  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 44, 118, 172, 183  
 <223> unknown base

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 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150  
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 tattttattc tcataaactg tggagctaata gtagacctat tggatattct 300  
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 tcaatgttgt caatgtatac aacgataccc 380

<210> 43  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 43  
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<210> 44  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 44  
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<210> 45  
 <211> 50  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 45  
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<210> 46

<211> 3089  
<212> DNA  
<213> Homo sapiens

<400> 46  
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aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200  
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taaagaatgc tgtctcctct tggaaaaaaaa aaaaaaaaa 3089

<210> 47

<211> 259

<212> PRT

<213> Homo sapiens

<220>

<221> Signal Peptide

<222> 1-20

<223> Signal Peptide

<220>

<221> N-glycosylation Site

<222> 72-75

<223> N-glycosylation Site

<220>

<221> Clq Domain Proteins

<222> 144-178, 78-111, 84-117

<223> Clq Domain Proteins

<400> 47

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Arg	Ala	Val	Ala	Ser	Gly	Cys	Gln	Arg	Cys	Cys	Asp	Ser	Glu	Asp	
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Pro	Leu	Asp	Pro	Ala	His	Val	Ser	Ser	Ala	Ser	Ser	Ser	Gly	Arg	
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Pro	His	Ala	Leu	Pro	Glu	Ile	Arg	Pro	Tyr	Ile	Asn	Ile	Thr	Ile	
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Tyr	Met	Gly	Arg	Glu	Gly	Pro	Gln	Gly	Glu	Pro	Gly	Pro	Gln	Gly	
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Ser	Lys	Gly	Asp	Lys	Gly	Glu	Met	Gly	Ser	Pro	Gly	Ala	Pro	Cys	
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Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu	
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His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe	
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Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala	
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Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser	
			170						175					180	
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys	
			185						190					195	
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met	

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Gln Ser Gln Ser	Val Met Leu Asp Leu	Ala Tyr Gly Asp Arg	Val
	215	220	225
Trp Val Arg Leu	Phe Lys Arg Gln Arg	Glu Asn Ala Ile Tyr	Ser
	230	235	240
Asn Asp Phe Asp	Thr Tyr Ile Thr Phe	Ser Gly His Leu Ile	Lys
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Ala Glu Asp Asp			

<210> 48  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 48  
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<210> 49  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 49  
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<210> 50  
 <211> 50  
 <212> DNA  
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<220>  
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<400> 50  
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<210> 51  
 <211> 2768  
 <212> DNA  
 <213> Homo sapiens

<400> 51  
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 ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150  
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<210> 52  
 <211> 673  
 <212> PRT  
 <213> Homo sapiens

<400> 52  
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 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
 35 40 45  
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe  
 50 55 60  
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu  
 65 70 75  
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser  
 80 85 90  
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu



410	415	420
His Leu Gly Thr Arg 425	His His Leu Ala Cys 430	Leu Cys Pro Glu Gly 435
Phe Thr Gly Leu Tyr 440	Cys Glu Ser Gln Met 445	Gly Gln Gly Thr Arg 450
Pro Ser Pro Thr Pro 455	Val Thr Pro Arg Pro 460	Pro Arg Ser Leu Thr 465
Leu Gly Ile Glu Pro 470	Val Ser Pro Thr Ser 475	Leu Arg Val Gly Leu 480
Gln Arg Tyr Leu Gln 485	Gly Ser Ser Val Gln 490	Leu Arg Ser Leu Arg 495
Leu Thr Tyr Arg Asn 500	Leu Ser Gly Pro Asp 505	Lys Arg Leu Val Thr 510
Leu Arg Leu Pro Ala 515	Ser Leu Ala Glu Tyr 520	Thr Val Thr Gln Leu 525
Arg Pro Asn Ala Thr 530	Tyr Ser Val Cys Val 535	Met Pro Leu Gly Pro 540
Gly Arg Val Pro Glu 545	Gly Glu Glu Ala Cys 550	Gly Glu Ala His Thr 555
Pro Pro Ala Val His 560	Ser Asn His Ala Pro 565	Val Thr Gln Ala Arg 570
Glu Gly Asn Leu Pro 575	Leu Leu Ile Ala Pro 580	Ala Leu Ala Ala Val 585
Leu Leu Ala Ala Leu 590	Ala Ala Val Gly Ala 595	Ala Tyr Cys Val Arg 600
Arg Gly Arg Ala Met 605	Ala Ala Ala Ala Gln 610	Asp Lys Gly Gln Val 615
Gly Pro Gly Ala Gly 620	Pro Leu Glu Leu Glu 625	Gly Val Lys Val Pro 630
Leu Glu Pro Gly Pro 635	Lys Ala Thr Glu Gly 640	Gly Gly Glu Ala Leu 645
Pro Ser Gly Ser Glu 650	Cys Glu Val Pro Leu 655	Met Gly Phe Pro Gly 660
Pro Gly Leu Gln Ser 665	Pro Leu His Ala Lys 670	Pro Tyr Ile

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<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<210> 56  
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<213> Homo sapiens

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 <211> 811  
 <212> PRT  
 <213> Homo sapiens

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 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu  
 50 55 60  
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg  
 65 70 75  
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys  
 80 85 90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	95	100	105
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	110	115	120
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	125	130	135
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	140	145	150
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	155	160	165
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	170	175	180
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	185	190	195
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	200	205	210
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	215	220	225
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	230	235	240
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	245	250	255
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	260	265	270
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	275	280	285
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	290	295	300
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	305	310	315
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	320	325	330
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	335	340	345
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	350	355	360
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	365	370	375
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	380	385	390
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	395	400	405

Gln Asn Leu Leu	Gln His Lys Asn Asp	Glu Asn Cys Ser Trp Pro	410	415	420
Glu Thr Val Val	Asn Met Asn Leu Ser	Tyr Asn Lys Leu Ser Asp	425	430	435
Ser Val Phe Arg	Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp Leu	440	445	450
Asn Asn Asn Gln	Ile Gln Thr Val Pro	Lys Glu Thr Ile His Leu	455	460	465
Met Ala Leu Arg	Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr Asp	470	475	480
Leu Pro Gly Cys	Ser His Phe Ser Arg	Leu Ser Val Leu Asn Ile	485	490	495
Glu Met Asn Phe	Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln Ser	500	505	510
Cys Gln Glu Val	Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe Arg	515	520	525
Cys Thr Cys Glu	Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr Ser	530	535	540
Glu Val Met Met	Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu Tyr	545	550	555
Pro Leu Asn Leu	Arg Gly Thr Arg Leu	Lys Asp Val His Leu His	560	565	570
Glu Leu Ser Cys	Asn Thr Ala Leu Leu	Ile Val Thr Ile Val Val	575	580	585
Ile Met Leu Val	Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu His	590	595	600
Phe Asp Leu Pro	Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr Gln	605	610	615
Thr Trp His Arg	Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys Arg	620	625	630
Asn Val Arg Phe	His Ala Phe Ile Ser	Tyr Ser Glu His Asp Ser	635	640	645
Leu Trp Val Lys	Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu Asp	650	655	660
Gly Ser Ile Leu	Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro Gly	665	670	675
Lys Ser Ile Ser	Glu Asn Ile Val Ser	Phe Ile Glu Lys Ser Tyr	680	685	690
Lys Ser Ile Phe	Val Leu Ser Pro Asn	Phe Val Gln Asn Glu Trp	695	700	705
Cys His Tyr Glu	Phe Tyr Phe Ala His	His Asn Leu Phe His Glu	710	715	720



Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
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Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740					745					750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
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Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
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Leu

<210> 58  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 58  
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<210> 59  
 <211> 27  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 59  
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<210> 60  
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<400> 60  
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<210> 61  
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<211> 756

<212> PRT

<213> Homo sapiens

<400> 62

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Glu	Asp	Pro	Asp	Tyr	Tyr	Gly	Gln	Glu	Ile	Trp	Ser	Arg	Glu	Pro	35	40	45	
Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro	50	55	60	
Leu	Pro	Ala	Gly	Pro	Gly	Glu	Glu	Trp	Glu	Arg	Arg	Pro	Gln	Glu	65	70	75	
Pro	Arg	Pro	Pro	Lys	Arg	Ala	Thr	Lys	Pro	Lys	Lys	Ala	Pro	Lys	80	85	90	
Arg	Glu	Lys	Ser	Ala	Pro	Glu	Pro	Pro	Pro	Pro	Gly	Lys	His	Ser	95	100	105	
Asn	Lys	Lys	Val	Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn	110	115	120	
Asp	Asp	His	Ser	Val	Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser	125	130	135	
Cys	Pro	Pro	Leu	Gly	Leu	Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln	140	145	150	
Leu	His	Ala	Ser	Thr	Val	Lys	Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg	155	160	165	
Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly	Ile	Asn	Glu	Asn	Asp	Phe	Tyr	170	175	180	
Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile				

185										190				195			
Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val	Ile	Thr			
				200					205					210			
Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr			
				215					220					225			
Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys			
				230					235					240			
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu			
				245					250					255			
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr			
				260					265					270			
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys			
				275					280					285			
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn			
				290					295					300			
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp			
				305					310					315			
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val			
				320					325					330			
Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly			
				335					340					345			
Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp			
				350					355					360			
His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile			
				365					370					375			
Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu			
				380					385					390			
Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala			
				395					400					405			
Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro			
				410					415					420			
Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser			
				425					430					435			
Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile			
				440					445					450			
Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu			
				455					460					465			
Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr			
				470					475					480			
Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Ala			
				485					490					495			
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe			

500					505					510				
Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr
				515					520					525
Pro	Tyr	Asp	Leu	Val	Arg	Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr
				530					535					540
Pro	Thr	Pro	Asp	Asp	His	Val	Phe	Arg	Trp	Leu	Ala	Tyr	Ser	Tyr
				545					550					555
Ala	Ser	Thr	His	Arg	Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys
				560					565					570
His	Thr	Glu	Asp	Phe	Gln	Lys	Glu	Glu	Gly	Thr	Val	Asn	Gly	Ala
				575					580					585
Ser	Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu
				590					595					600
His	Thr	Asn	Cys	Phe	Glu	Leu	Ser	Ile	Tyr	Val	Gly	Cys	Asp	Lys
				605					610					615
Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg
				620					625					630
Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys
				635					640					645
Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile
				650					655					660
Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp
				665					670					675
Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr
				680					685					690
Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val
				695					700					705
Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys
				710					715					720
Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys
				725					730					735
Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg
				740					745					750
Lys	Arg	Arg	Gln	Arg	Gly									
				755										

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gttctcaatg agctacccgt cccc 24

<210> 64  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 64  
cgcgatgtag tggaactcgg gctc 24

<210> 65  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 65  
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66  
<211> 2854  
<212> DNA  
<213> Homo sapiens

<400> 66  
ctaagaggac aagatgaggc ccggcctctc atttctccta gcccttctgt 50  
tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100  
cccagccccg gcttcagctc tttcccaggt gttgactcca gctccagctt 150  
cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200  
gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250  
cgtgggacct gccagtgtc tgtttccctg ccagacacca cttttcccg 300  
ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350  
ttgagaaaga acttttctaa gtgaggggaat atgtccaatt aattagtgtg 400  
tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450  
ggataccatt tcttacactg aactggactt cgagctgac aaggtagaag 500  
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttgggtgga 550  
agctcagaaa ttgttgacca gctggagggtg gagataagaa atatgactct 600  
cttggtagag aagcttgaga cactagacaa aaacaatgtc cttgccattc 650  
gccgagaaat cgtggctctg aagaccaagc tgaaagagtg tgaggcctct 700  
aaagatcaaa acaccctgt cgtccaccct cctcccactc caggagctg 750  
tggtcatggt ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800  
actggagagg gttttcttat ctatatggtg cttggggtag ggattactct 850  
cccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950  
 tattgtatat aaatgctcga gagttgcgga tcacctatgg ccaaggtagt 1000  
 ggtacagcag tttacaacaa caacatgtac gtcaacatgt acaacaccgg 1050  
 gaatattgcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100  
 ctctccctaa tgctgcctat aataaccgct tttcatatgc taatgttgct 1150  
 tggcaagata ttgactttgc tgtggatgag aatggattgt gggttattta 1200  
 ttcaactgaa gccagcactg gtaacatggg gattagtaaa ctcaatgaca 1250  
 ccacacttca ggtgctaaac acttggtata ccaagcagta taaaccatct 1300  
 gcttctaacg ccttcattgg atgtgggggt ctgtatgcca cccgtactat 1350  
 gaacaccaga acagaagaga ttttttacta ttatgacaca aacacagga 1400  
 aagagggcaa actagacatt gtaatgcata agatgcagga aaaagtgcag 1450  
 agcattaact ataacccttt tgaccagaaa ctttatgtct ataacgatgg 1500  
 ttaccttctg aattatgac tttctgtctt gcagaagccc cagtaagctg 1550  
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 ccacttactt agatatctgc aggggtgtct aaaagtgtgt tcattttgca 1650  
 gcaatgttta ggtgcatagt tctaccacac tagagatcta ggacatttgt 1700  
 cttgatttgg tgagttctct tgggaatcat ctgcctcttc aggcgcattt 1750  
 tgcaataaag tctgtctagg gtgggattgt cagaggctca ggggcactgt 1800  
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 ggaattaagg aacttaaaac tcagtatggc gtctagggat tctttgtaca 1900  
 ggaaatattg ccaatgact agtcctcatc catgtagcac cactaattct 1950  
 tccatgcctg gaagaaacct ggggacttag ttaggtagat taatatctgg 2000  
 agctcctcga gggaccaaact cccaacttt ttttccct cactagcacc 2050  
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 cctgcttttt cttttctctc attgtccacc ttactaaaag tcagtagaat 2250  
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 aaaaaatta atagttttct atggaactga tctaagatta gaaaaatta 2400  
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 agaaaatctg atggcagtga caaagtgcta gcatttattg ttatctaata 2500



aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcatgt 2550  
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tttttttttc taggacgagc tatagaaaag ctattgagag tatctagtta 2650  
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cttttgaatg actttatcat ctagtctttg tctatttttc ctttgatggt 2750  
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aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850  
aaaa 2854

<210> 67  
<211> 510  
<212> PRT  
<213> Homo sapiens

<400> 67  
Met Arg Pro Gly Leu Ser Phe Leu Leu Ala Leu Leu Phe Phe Leu 15  
1 5 10  
Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro 30  
20 25 30  
Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser 45  
35 40 45  
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu 60  
50 55 60  
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly 75  
65 70 75  
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro 90  
80 85 90  
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr 105  
95 100 105  
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val 120  
110 115 120  
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu 135  
125 130 135  
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser 150  
140 145 150  
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu 165  
155 160 165  
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser 180  
170 175 180  
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr 195  
185 190 195  
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu 210  
200 205 210

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu
				215					220					225
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro
				230					235					240
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser
				245					250					255
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu
				260					265					270
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys
				275					280					285
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu
				290					295					300
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr
				305					310					315
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly
				320					325					330
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr
				335					340					345
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val
				350					355					360
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr
				365					370					375
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn
				380					385					390
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met
				395					400					405
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr
				410					415					420
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met
				425					430					435
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr
				440					445					450
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly
				455					460					465
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser
				470					475					480
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp
				485					490					495
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln
				500					505					510

<210> 68  
 <211> 410  
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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ggtgaacatc agcaaaccgt ctgtgggttca gctcaactgg agagggtttt 150  
cttatctata tgggtgcttgg ggtagggatt actctcccca gcatccaaac 200  
aaagggnatgt attggngggc gccattgaat acagatggga gactgttgga 250  
gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300  
ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350  
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400  
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atgggtggtg ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

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tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150  
ccgtgtttgc tatgccgatg ctgtcctagt ggaaacaact ccactgtaac 200  
tagattgatc tatgcacttt tcttgcctgt tggagtatgt gtagcttgtg 250  
taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300  
tgtgagaatg agaaagggtgt tgtccctgtt aacattttgg ttggctataa 350  
agctgtatat cgtttgtgct ttggtttggc tatgttctat cttcttctct 400  
ctttaactaat gatcaaagtg aagagtagca gtgacctag agctgcagtg 450  
cacaatggat tttggttctt taaatttgcg gcagcaattg caattattat 500  
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catccagcca gttgttcaga aaacaaggcg ttcacagtg tcaacatgct 800  
cctctgcgtt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850  
cacaaccaag atctggtttg ttacagtctt cagtaattac agtctacaca 900  
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 tgcaaagaac atgggtttatt ttaaaattta taaacaagtc acttaaatgc 1900  
 cagttgtctg aaaaatctta taaggtttta cccttgatac ggaatttaca 1950  
 caggtaggga gtgttttagtg gacaatagtg taggttatgg atggaggtgt 2000  
 cggactaaa ttgaataacg agtaaataat ctacttggg tagagatggc 2050  
 ctttgccaac aaagtgaact gttttggttg ttttaaactc atgaagtatg 2100  
 ggttcagtg aaatgttttg aactctgaag gatttagaca aggttttgaa 2150  
 aaggataatc atgggttaga aggaagtgtt ttgaaagtca ctttgaaagt 2200  
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 cacatggtga acctgttcta taaaaataat ctggcttga gcatatgcct 2350  
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 aggaagtaac tgcaaaacca ctaggcttta gtaggtactt atataaaatc 2550  
 tagtccagtt ctctcattta aaaaaatgaa gacactgaaa tacagactta 2600  
 aatagctcag atagctaatt aggaaatttc aagttggcca ataatagcac 2650  
 tctctctgac atttaaaaat aatttctatt caaaatacat gcatattgat 2700  
 ttacacctca tactgtgata attaatgtga tgtggattgc tgggtgtccag 2750  
 catgacccat aaacagggtca gaagaatgat ggaatgtttt agaataaact 2800  
 cctgcttata gtatactaca cagttcaaaa gatgtttaaa atgcttttgt 2850  
 atttactgcc atgtaattga aatatataga ttattgtaac ctttcaacct 2900  
 gaaaatcaag cagtatgaga gtttagttat ttgtatgtgt cactagtgtc 2950  
 taatgaagct tttaaaatct acaatttctt ctttaaaaat atttattaat 3000  
 gtgaatggaa tataacaatt cagcttaatt cccaacctt attctgtgtg 3050  
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 atgaattcag agaaaaaaaa aaaaaaa 3127

<210> 73  
 <211> 453  
 <212> PRT  
 <213> Homo sapiens

<400> 73

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Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Leu	Leu	Cys	Arg	Cys	Cys	Pro	20	25	30	
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe	35	40	45	
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly	50	55	60	
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu	65	70	75	
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val	80	85	90	
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser	95	100	105	
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala	110	115	120	
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala	125	130	135	
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr	140	145	150	
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu	155	160	165	
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu	170	175	180	
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr	185	190	195	
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu	200	205	210	
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser	215	220	225	
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys	230	235	240	
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser	245	250	255	
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr	260	265	270	
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr	275	280	285	

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr
				290					295					300
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala
				305					310					315
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr
				320					325					330
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr
				335					340					345
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg
				350					355					360
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val
				365					370					375
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His
				380					385					390
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr
				395					400					405
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp
				410					415					420
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val
				425					430					435
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg
				440					445					450

Asp Phe Asp

<210> 74  
 <211> 480  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 48, 163  
 <223> unknown base

<400> 74  
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 cgttgtggag atggggagcg tccctggggc tgtgctccat ggcgagctgg 100  
 ataccatggt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150  
 tagtggaac aantccactg taactagatt gatctatgca cttttottgc 200  
 ttgttgagat atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250  
 caactgaata agattcctgg attttgtag aatgagaaag gtgttggtcc 300  
 ttgtaacatt ttggttggtc ataaagctgt atatcgtttg tgctttgggt 350  
 tggctatggt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgcacaat ggattttggt tcttttaaatt 450  
tgctgcagca attgcaatta ttattggggc 480

<210> 75  
<211> 438  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323  
<223> unknown base

<400> 75  
gttattgtga actttgtgga gatgggaggt cntggggctg tgttccatgg 50  
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100  
tgctgtccta gtggaaacaa ntccactgta attagattga tntatgcact 150  
ttntttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200  
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250  
gttgtccctt gtaacatttt gggtggctat aaagctgtat atngtttgtg 300  
ctttggtttg gctangttct atnttcttct ctctttacta atgatcaaag 350  
tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400  
tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76  
<211> 473  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 48  
<223> unknown base

<400> 76  
aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50  
gagatgggga gcgtccttgg gggtgtgctc catggcgagc tggataccat 100  
gtttgtgtgg aagtgcctcg tgtttgctat gccgatgctg tcctagtggg 150  
aacaactcca ctgtaactag attgatctat gcacttttct tgcttggttg 200  
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250  
ataagattcc tggattttgt gagaatgaga aaggtgttgt cccttgtaac 300  
attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggctat 350  
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400  
atcctagagc tgcagtgcac aatggatttt gggtctttta atttgctgca 450  
gcaattgcaa ttattattgg ggc 473



<210> 77  
<211> 666  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 21, 111  
<223> unknown base

<400> 77  
gctgtcctta gtggaaacaa ntccaacttg taacttggat tgatctatgc 50  
actttttcct tgcttgttgg agtatgtgta gctttgtgta atgttgttcc 100  
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150  
gaaagggtgtt gtccccttgt aacatttttg gttggctata aagctgtata 200  
tcgtttgtgc tttggtttgg ctatgttcta tcttcttctc tctttactaa 250  
tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300  
ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350  
cttcattcca gaaggaactt ttacaactgt gtggttttat gtaggcattg 400  
cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450  
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaactc 500  
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550  
tgtctttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600  
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650  
tggtgcttct gtaatg 666

<210> 78  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 78  
atgtttgtgt ggaagtgcc cg 22

<210> 79  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 79  
gtcaacatgc tcctctgc 18

<210> 80  
<211> 26

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 80  
aatccattgt gcactgcagc tctagg 26

<210> 81  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
gagcatgccca ccaactggact gac 23

<210> 82  
<211> 54  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 82  
gccgatgctg tcctagtggga aacaactcca ctgtaactag attgatctat 50  
gcac 54

<210> 83  
<211> 3906  
<212> DNA  
<213> Homo sapiens

<400> 83  
ctcggggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcgggtc 50  
gcggccggcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100  
cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggcgagtc 150  
ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200  
agcgcccggc cggggctgtc gcactccccg cggaacattt ggctccctcc 250  
agctccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg 300  
tttccagcca agtggacctg atcgatggcc ctctgaatt tatcacgata 350  
tttgatttat tagcgatgcc ccttggtttg tgtgttacgc acacacacgt 400  
gcacacaagg ctctggctcg cttccctccc tcgtttccag ctcttgggcg 450  
aatcccacat ctgtttcaac tctccgccga gggcgagcag gagcgagagt 500  
gtgtcgaatc tgcgagtga gagggacgag ggaaaagaaa caaagccaca 550  
gacgcaactt gagactcccg catcccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggccccccga gcctcgtgct gtgcttgctg tccgcaactg 650  
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 aaaggcaggt ttcagagggga ccgcaggaac atccgcccc aatcatcct 750  
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 acaagacccg gcgcatcatg gagcagggcg gggcgcaact catcaacgcc 850  
 ttctgtacca caccatgtg ctgccctca cgctcctcca tcctcaactg 900  
 caagtacgtc cacaaccaca acacctacac caacaatgag aactgctcct 950  
 cgccctcctg gcaggcacag cagcagagcc gcacctttgc cgtgtacctc 1000  
 aatagcactg gctaccggac agctttcttc gggaagtatc ttaatgaata 1050  
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 tgacagcgtg agcttcttcc gcacgtccaa gaagatgtac ccgcacaggc 1250  
 cagtctcat ggtcatcagc catgcagccc cccacggccc tgaggattca 1300  
 gccccacaat attcacgcct cttcccaaac gcatctcagc acatcacgcc 1350  
 gagctacaac tacgcgcccc acccgacaa aactggatc atgcgctaca 1400  
 cggggcccat gaagcccatc cacatggaat tcaccaacat gctccagcgg 1450  
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 ctcaaaaagg aaaacggaga gagcgagcga gagagatttc cttggaaatt 3550  
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 aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgcagagacg 3700  
 tttgacaatg agtcagtagc acaaaagaga tgacatttac ctagcactat 3750  
 aaaccctggc tgctctgaa gaaactgcct tcattgtata tatgtgacta 3800

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850  
 caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa 3900  
 gaaaaa 3906

<210> 84  
 <211> 867  
 <212> PRT  
 <213> Homo sapiens

<400> 84  
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val  
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 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg  
 20 25 30  
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn  
 35 40 45  
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser  
 50 55 60  
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly  
 65 70 75  
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro  
 80 85 90  
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn  
 95 100 105  
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala  
 110 115 120  
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly  
 125 130 135  
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly  
 140 145 150  
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys  
 155 160 165  
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys  
 170 175 180  
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu  
 185 190 195  
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met  
 200 205 210  
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro  
 215 220 225  
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro  
 230 235 240  
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn  
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	260	265	270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	275	280	285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	290	295	300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	305	310	315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	320	325	330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	335	340	345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	350	355	360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	365	370	375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	380	385	390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	395	400	405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	410	415	420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	425	430	435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	440	445	450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	455	460	465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	470	475	480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	485	490	495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	500	505	510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	515	520	525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	530	535	540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	545	550	555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	560	565	570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	575	580	585
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	590	595	600
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	605	610	615
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	620	625	630
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	635	640	645
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	650	655	660
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	665	670	675
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	680	685	690
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	695	700	705
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	710	715	720
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	725	730	735
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	740	745	750
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	755	760	765
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	770	775	780
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	785	790	795
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	800	805	810
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	815	820	825
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg	830	835	840
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	845	850	855
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly				860	865	

<210> 85  
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 <212> DNA

<213> Artificial Sequence  
 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 85  
 gaagccggct gtctgaatc 19  
 <210> 86  
 <211> 18  
 <212> DNA  
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 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 86  
 ggccagctat ctccgcag 18  
 <210> 87  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 87  
 aagggcctgc aagagaag 18  
 <210> 88  
 <211> 18  
 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
 <400> 88  
 cactgggaca actgtggg 18  
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 <212> DNA  
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 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 89  
 cagaggcaac gtggagag 18  
 <210> 90  
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 <213> Artificial Sequence  
 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 90  
 aagtattgtc atacagtgtt c 21



<210> 91  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 91  
tagtacttgg gcaacgaggtt ggag 24

<210> 92  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 92  
tcataccaac tgctggtcat tggc 24

<210> 93  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 93  
ctcaagctgc tggacacgga ggcggccggtg aatcggtttc acttg 45

<210> 94  
<211> 971  
<212> DNA  
<213> Homo sapiens

<400> 94  
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aaggagtgag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100  
tgggcctcct ggggagcaca gccctcgtgg gatggatcac aggtgctgct 150  
gtggcgggtcc tgctgctgct gctgctgctg gccacctgcc ttttccacgg 200  
acggcaggac tgtgacgtgg agaggaaccg tacagctgca gggggaaacc 250  
gagtcgcgcg ggcccagcct tggcccttcc ggcggcgggg ccacctggga 300  
atctttcacc atcacgctca tcctggccac gtatctcatg tgccgaatgt 350  
gggcctccac caccaccacc acccccgcga caccctcac cacctccacc 400  
accaccacca cccccaccgc caccatcccc gccacgctcg ctgaggctgc 450  
tgtcgccggt gccgtgggac agcagctgcc cctgcccctcc catctgttcc 500  
caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctggggt 550  
gaacgagggg aacaatagac tggggcttgc tccagctgca tttgcatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650  
 gtgctgaagg gtttggggag tggagagcaa ggggtgctctt tcggggctgg 700  
 acagcccgtc ttgtgacagt gactcccagt gagccccaga aatgacaagc 750  
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800  
 ctctcatca ggctgctgca ggcctctggc gggcagggca ctgggagagg 850  
 ccctgagaat gtccttttgg tttggagaag gcagtgtgag gctgcacagt 900  
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950  
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 95  
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 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr  
                     20                    25                    30  
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg  
                     35                    40                    45  
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro  
                     50                    55                    60  
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His  
                     65                    70                    75  
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His  
                     80                    85                    90  
 His His Pro Arg His Thr Pro His His Leu His His His His His  
                     95                    100                    105  
 Pro His Arg His His Pro Arg His Ala Arg  
                     110                    115

<210> 96  
 <211> 1312  
 <212> DNA  
 <213> Homo sapiens

<400> 96  
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 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150  
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggcctacaag 200  
 ttccacatgg ggctctatgg tgagactggg cggcttttca ctgagagctg 250  
 cagcatctct cccaagctcc gctccatcgc tgtctactat gacaaccccc 300

acatggtgcc ccttgataag tgccgatgtg ccgtgggcag catcctgagt 350  
 gaaggtgagg aatcgccctc ccttgagctc atcgacctct accagaaatt 400  
 tggcttcaag gtgtttctct tcccggcacc cagccatgtg gtgacagcca 450  
 ccttccccta caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500  
 catcctgcct tggacaccta catcaaggag cggaagctgt gtgcctatcc 550  
 tcggctggag atctaccagg aagaccagat ccatttcatg tgcccactgg 600  
 cacggcaggg agactttctat gtgcctgaga tgaaggagac agagtggaaa 650  
 tggcgggggc ttgtggaggc cattgacacc caggtggatg gcacaggagc 700  
 tgacacaatg agtgacacga gttctgtaag cttggaagtg agccctggca 750  
 gccgggagac ttcagctgcc aactgtcac ctggggcgag cagccgtggc 800  
 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcaggtgc 850  
 cagcggctcc tcttttgagg agctggactt ggagggcgag gggcccttag 900  
 gggagtacg gctggaccct gggactgagc ccctggggac taccaagtgg 950  
 ctctgggagc cactgcccc tgagaagggc aaggagtaac ccatggcctg 1000  
 caccctcctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050  
 ctctccagcc ctcttctcc ttcctctggg ggaggagggg ttcctgaggg 1100  
 acctgacttc ccctgctcca ggctcttgc taagccttct cctcactgcc 1150  
 ctttaggctc ccagggccag aggagccagg gactattttc tgcaccagcc 1200  
 cccagggctg ccgcccctgt tgtgtctttt tttcagactc acagtggagc 1250  
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300  
 aaaaaaaaaa aa 1312

<210> 97  
 <211> 313  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
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 Leu Leu Leu Leu Thr Leu Leu Ala Phe Ala Gly Tyr Ser Gly Leu  
 20 25 30  
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn  
 35 40 45  
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr  
 50 55 60  
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg  
 65 70 75

Ser	Ile	Ala	Val	Tyr	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	80	85	90
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	Glu	95	100	105
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	Phe	110	115	120
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	Thr	125	130	135
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	Arg	140	145	150
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	Cys	155	160	165
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	Phe	170	175	180
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	Met	185	190	195
Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	Asp	200	205	210
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	Ser	215	220	225
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	Ala	230	235	240
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	Gly	245	250	255
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	Gly	260	265	270
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	Gly	275	280	285
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	Lys	290	295	300
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu			305	310	

<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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ctgaggctgg gctcgaaacc gaaagtccc tccggaccct ccaagtggag 200

accctggtgg agccccaga accatgtgcc gagcccgtg cttttggaga 250

cacgcttcac atacactaca cggaagctt ggtagatgga cgtattattg 300  
 acacctccct gaccagagac cctctgggta tagaacttgg ccaaaagcag 350  
 gtgattccag gtctggagca gactcttctc gacatgtgtg tgggagagaa 400  
 gogaagggca atcattcctt ctacttggc ctatggaaaa cggggatttc 450  
 caccatctgt cccagcggat gcagtgggtgc agtatgacgt ggagctgatt 500  
 gcactaatcc gagccaacta ctggctaaag ctggtgaagg gcattttgcc 550  
 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600  
 acctatacag aaaggccaat agacccaaag tctccaaaaa gaagctcaag 650  
 gaagagaaac gaaacaagag caaaaagaaa taataaataa taaattttta 700  
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99  
 <211> 201  
 <212> PRT  
 <213> Homo sapiens

<400> 99  
 Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu  
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 Leu Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu  
 20 25 30  
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu  
 35 40 45  
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu  
 50 55 60  
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp  
 65 70 75  
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys  
 80 85 90  
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val  
 95 100 105  
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly  
 110 115 120  
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln  
 125 130 135  
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu  
 140 145 150  
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val  
 155 160 165  
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala  
 170 175 180  
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys  
200

<210> 100  
<211> 705  
<212> DNA  
<213> Homo sapiens

<400> 100  
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cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgccgggct 150  
gaggctgggc tcgaaaccga aagtcccgtc cggaccctcc aagtggagac 200  
cctgggtggag cccccagAAC catgtgcoga gcccgctgct tttggagaca 250  
cgcttcacat aactacacg ggaagcttgg tagatggacg tattattgac 300  
acctccctga ccagagaccc tctggttata gaacttggcc aaaagcaggt 350  
gattccaggt ctggagcaga gtcttctoga catgtgtgtg ggagagaagc 400  
gaagggcaat cattccttct cacttggcct atggaaaacg gggatttcca 450  
ccatctgtcc cagcggatgc agtgggtgcag tatgacgtgg agctgattgc 500  
actaatccga gccaaactact ggctaaagct ggtgaagggc attttgctc 550  
tggtagggat ggccatggtg ccacctctct gggcctcatt gggatatcacc 600  
tatacagaaa ggccaataga ccaaagtct caaaaaagaa gctcaaggaa 650  
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700  
actta 705

<210> 101  
<211> 543  
<212> DNA  
<213> Homo sapiens

<400> 101  
ccgaaagtcc cgtccggacc ctccaagtgg agaccctggt ggagccccca 50  
gaaccatgtg ccgagcccgC tgcttttTga gacacgcttc acatacacta 100  
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150  
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200  
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggc caatcattcc 250  
ttctcacttg gcctatggaa aacggggatt tccaccatct gtcccagcgg 300  
atgcagtggg gcagtatgac gtggagctga ttgcactaat ccgagccaac 350  
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctctgggcc tcattgggta tcacctatac agaaaggcca 450  
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500  
 agcaaaaaga aataataaat aataaatttt aaaaaactta aaa 543

<210> 102  
 <211> 1316  
 <212> DNA  
 <213> Homo sapiens

<400> 102  
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 aaatcggggg agtgaggcgg gccggcgcg cgcgacaccg ggctccggaa 100  
 ccactgcacg acggggctgg actgacctga aaaaaatgtc tggatttcta 150  
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgcaatac 200  
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtgatta 250  
 tcatagatgc agctgttatt tatccacca tgaaagattt caaccactca 300  
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350  
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 gtcaaacagg tgctcgcatt tggtttttcg ttggtttcat gttggccttt 450  
 ggatctctga ttgcatctat gtggattctt tttggagggt atgttgctaa 500  
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550  
 tcatcttttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600  
 tggcagtga cacaatctgat tccccacagc acaacagccc tgcattgggt 650  
 tgtttgtttt tttactgctc actcccaacc ttttgtaatg ccattttcta 700  
 aacttatttc tgagtgtagt ctgagcttaa agttgtgtaa tactaaaatc 750  
 acgagaacac ctaaacaaca accaaaaatc tattgtggta tgcacttgat 800  
 taacttataa aatgtagag gaaactttca catgaataat ttttgtcaaa 850  
 ttttatcatg gtataatttg taaaaataaa aagaaattac aaaagaaatt 900  
 atggatttgt caatgtaagt atttgtcata tctgagggtc aaaaccacaa 950  
 tgaaagtgt ctgaagattt aatgtgttta ttcaaagtgt gtctcttctg 1000  
 tgtcaaagt taaatgaaat ataaacattt tttagttttt aaaatattcc 1050  
 gtggtcaaaa ttcttcctca ctataattgg tatttacttt taccaaaaat 1100  
 tctgtgaaca tgtaatgtaa ctggcttttg aggggtctcc aaggggtgag 1150  
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtccctg 1200  
 tgtcccttcc atgggaagg cttccgctgt gcctctcatt ccaagggcag 1250  
 gaagatgtga ctgagccatg acacgtggtt ctggtgggat gcacagtcac 1300

tccacatcca ccaactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

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Trp	Gly	Glu	Lys	Arg	Asn	Thr	Ile	Ala	Ser	Ile	Ala	Ala	Gly	Val
				20					25					30
Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Ile	Ile	Asp	Ala	Ala	Val	Ile
				35					40					45
Tyr	Pro	Thr	Met	Lys	Asp	Phe	Asn	His	Ser	Tyr	His	Ala	Cys	Gly
				50					55					60
Val	Ile	Ala	Thr	Ile	Ala	Phe	Leu	Met	Ile	Asn	Ala	Val	Ser	Asn
				65					70					75
Gly	Gln	Val	Arg	Gly	Asp	Ser	Tyr	Ser	Glu	Gly	Cys	Leu	Gly	Gln
				80					85					90
Thr	Gly	Ala	Arg	Ile	Trp	Leu	Phe	Val	Gly	Phe	Met	Leu	Ala	Phe
				95					100					105
Gly	Ser	Leu	Ile	Ala	Ser	Met	Trp	Ile	Leu	Phe	Gly	Gly	Tyr	Val
				110					115					120
Ala	Lys	Glu	Lys	Asp	Ile	Val	Tyr	Pro	Gly	Ile	Ala	Val	Phe	Phe
				125					130					135
Gln	Asn	Ala	Phe	Ile	Phe	Phe	Gly	Gly	Leu	Val	Phe	Lys	Phe	Gly
				140					145					150
Arg	Thr	Glu	Asp	Leu	Trp	Gln								
				155										

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

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tggatttcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150  
agcgcaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200  
tggtggatta tcatagatgc agctgttatt tatccacca tgaaagattt 250  
caaccactca taccatgcct gtggtgttat agcaaccata gccttcctaa 300  
tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagtga 350  
ggttgtctgg gtcaaacagg tgctcgcat tggcttttcg ttggtttcat 400



gttggccttt ggatctctga ttgcatctat gtggattcct tttggagggt 450  
 atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500  
 cagaatgcct tcatcttttt tggagggtcg gtttttaagt ttggc 545

<210> 105  
 <211> 490  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 31, 39, 108, 145, 179, 219, 412, 479  
 <223> unknown base

<400> 105  
 tggacggacc tgaaaaaaat gtttggattt ntagagggtt tgagatgttc 50  
 agaatgcatg actgggggaa aagcgcaaact actattgctt ccattgctgc 100  
 tgggtgtaata ttttttacag gctggtggat tatcatagat gcagntgtta 150  
 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200  
 atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 250  
 ccgagggtgat agttacagt aaggttggtt gggtaaaca ggtgctcgca 300  
 tttggctttt cgttggtttc atgttggcct ttggatctct gattgcatct 350  
 atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400  
 ccctggaatt gntgtatctt tccagaatgc cttcatcttt tttggagggc 450  
 tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106  
 <211> 466  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449  
 <223> unknown base

<400> 106  
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 aatgtttgga ttttttagagg gcttgagatg ntcagaatgc attgactggg 100  
 ggaaaagcgc aatantattg ctttcattg ctgctggtgt actatttttt 150  
 acagggtggt ggattatcat agatgcagct gttatttata ccaccatgaa 200  
 agatttnaac cactcatacc atgcctgtgg tggtatagca accatagcct 250  
 tcctaataatg taatgcagta tcgaatggac aagtcagagg tgatagttac 300  
 agtgaaggtt gtttgggtca aacagtgnt cgcatttggc ttttcgttgg 350  
 tttcatgttg gccttggat ttctgattgn attctatgcg gattcttctt 400

ggagggttatg ttgctaaaga aaaagaCata gtataccctg gaattnctnt 450  
atTTTTccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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antattgctt ccattgntgn tgggtgnta tttttttaca ggctgggtgga 100

ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgagggtga tagttacagt gaagggttgtt 250

tgggtcaaac aggtgntngc atttggtttt tngttggttt catgttggcc 300

tttgatctn tgattgcatt tatgtggatt ntttttgag gttatgttgc 350

taaagnaanaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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ggcccggcgc ggcgngacac cgggttccgg gaaccattgc acgacggggg 100

ggactgacct gaaaaaatg tttggatttn tagagggctt gagatgctca 150

gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200

tgggtgtacta ttttttacag gctgggtggat tatcatagat gcagctgtta 250

tttatccac catgaaagat ttcaaccact cataccatgc ctgtgggtgtt 300

atagcaacca tagccttcct aatgattaat gcagtatcga atggacaagt 350

ccgagggtgat agttacagtg aagggtgtct ggggtcaaaca ggtgctcgca 400

tttggtttt cgttggtttc atgttggcct ttggatntct gattgcatct 450

atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 500

ccctggaatt gctgtatttt tccagaatgc cttcatnttt tttggagggc 550

tg 552

<210> 109  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 109  
gggtggatgg tactgctgca tcc 23

<210> 110  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 110  
tgttgtgctg tgggaaatca gatgtg 26

<210> 111  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 111  
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<210> 112  
<211> 3004  
<212> DNA  
<213> Homo sapiens

<400> 112  
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ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccctggtaac 150  
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agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450  
ggctccccctg tcctctcctt ttgacatcat ggtactggaa gggcccaatg 500  
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 aaaa 3004

<210> 113  
 <211> 610  
 <212> PRT  
 <213> Homo sapiens

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 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val  
 35 40 45  
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser  
 50 55 60  
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser  
 65 70 75  
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly  
 80 85 90  
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys  
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile
				110					115					120
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile
				125					130					135
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser
				140					145					150
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys
				155					160					165
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu
				170					175					180
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile
				185					190					195
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu
				200					205					210
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys
				215					220					225
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln
				230					235					240
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu
				245					250					255
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro
				260					265					270
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr
				275					280					285
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala
				290					295					300
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu
				305					310					315
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys
				320					325					330
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile
				335					340					345
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr
				350					355					360
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys
				365					370					375
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val
				380					385					390
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser
				395					400					405
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met
				410					415					420

Glu Arg Tyr Val	Ser Met Pro Arg Glu	Glu Ala Ala Glu His Ile	425	430	435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr Trp	440	445	450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile Pro	455	460	465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys Gly	470	475	480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val Glu	485	490	495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu Gly	500	505	510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln Phe	515	520	525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His Asp	530	535	540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala Gln	545	550	555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe Thr	560	565	570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser Ser	575	580	585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu Asp	590	595	600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys	Asn	605	610	

<210> 114  
 <211> 1701  
 <212> DNA  
 <213> Homo sapiens

<400> 114  
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 cgtcctcgga tgaagaaggc agccaggatg aatccttaga ttccaagact 200  
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 agttgctggt caaatatttc ttgattcaga agaattctgaa ttagaatcct 300  
 ctattcaaga agaggaagac agcctcaaga gccaaagagg ggaaagtgtc 350  
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400  
 tgaagagcca aagaaagtac ggaaaccagc tttgaccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500  
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tacaacctat gactacaaaag cagatgaaaa gtggggcctt tgtgaaactg 600  
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agaagcatat cggtatctcc aaaaggcagc aagcatgaac cataccaaaag 750  
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ggctaataat attaacatca gaagaatttg tggtttatag cggccacaac 1050  
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ctattttgct aatttggttac tttttctttg ctaatttgga agattaactc 1600  
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a 1701

<210> 115  
<211> 301  
<212> PRT  
<213> Homo sapiens

<400> 115  
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Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp  
20 25 30



Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val	35	40	45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe	50	55	60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu	65	70	75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp	80	85	90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu	95	100	105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly	110	115	120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp	125	130	135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg	140	145	150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp	155	160	165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met	170	175	180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn	185	190	195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu	200	205	210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val	215	220	225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln	230	235	240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro	245	250	255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly	260	265	270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly	275	280	285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg	290	295	300

Leu

<210> 116  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens

<400> 116

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 aaaatggggtt aataatatc aacatgtcaa caac 584

<210> 117  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 117  
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 20 25 30  
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln  
 35 40 45  
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg  
 50 55 60  
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu  
 65 70 75  
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala  
 80 85 90  
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val  
 95 100 105  
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly  
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 Phe Ser Pro

<210> 118  
 <211> 3402  
 <212> DNA  
 <213> Homo sapiens

<400> 118

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 cgcctggtct ttcagccatg ctgatgacca caccocgtcc aggccagaca 3300  
 ccacccccca cccactgtc gtggtggccc cagatctctg taattttatg 3350  
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 aa 3402

<210> 119  
 <211> 504  
 <212> PRT  
 <213> Homo sapiens

<400> 119

Met	Thr	Pro	Ser	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Pro	Pro	Leu	Leu	1	5	10	15
Leu	Gly	Ala	Phe	Pro	Pro	Ala	Ala	Ala	Ala	Arg	Gly	Pro	Pro	Lys	20	25	30	
Met	Ala	Asp	Lys	Val	Val	Pro	Arg	Gln	Val	Ala	Arg	Leu	Gly	Arg	35	40	45	
Thr	Val	Arg	Leu	Gln	Cys	Pro	Val	Glu	Gly	Asp	Pro	Pro	Pro	Leu	50	55	60	
Thr	Met	Trp	Thr	Lys	Asp	Gly	Arg	Thr	Ile	His	Ser	Gly	Trp	Ser	65	70	75	
Arg	Phe	Arg	Val	Leu	Pro	Gln	Gly	Leu	Lys	Val	Lys	Gln	Val	Glu	80	85	90	
Arg	Glu	Asp	Ala	Gly	Val	Tyr	Val	Cys	Lys	Ala	Thr	Asn	Gly	Phe	95	100	105	
Gly	Ser	Leu	Ser	Val	Asn	Tyr	Thr	Leu	Val	Val	Leu	Asp	Asp	Ile	110	115	120	
Ser	Pro	Gly	Lys	Glu	Ser	Leu	Gly	Pro	Asp	Ser	Ser	Ser	Gly	Gly	125	130	135	
Gln	Glu	Asp	Pro	Ala	Ser	Gln	Gln	Trp	Ala	Arg	Pro	Arg	Phe	Thr	140	145	150	
Gln	Pro	Ser	Lys	Met	Arg	Arg	Arg	Val	Ile	Ala	Arg	Pro	Val	Gly	155	160	165	
Ser	Ser	Val	Arg	Leu	Lys	Cys	Val	Ala	Ser	Gly	His	Pro	Arg	Pro	170	175	180	
Asp	Ile	Thr	Trp	Met	Lys	Asp	Asp	Gln	Ala	Leu	Thr	Arg	Pro	Glu	185	190	195	
Ala	Ala	Glu	Pro	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu	Lys	Asn	200	205	210	
Leu	Arg	Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser	Asn	215	220	225	
Arg	Ala	Gly	Ala	Ile	Asn	Ala	Thr	Tyr	Lys	Val	Asp	Val	Ile	Gln	230	235	240	

Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	245	250	255
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	260	265	270
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	275	280	285
Tyr	Gly	Ala	Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	290	295	300
Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	305	310	315
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln	320	325	330
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	335	340	345
Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys	350	355	360
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu	365	370	375
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile	380	385	390
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro	395	400	405
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro	410	415	420
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu	425	430	435
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His	440	445	450
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val	455	460	465
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr	470	475	480
His	Thr	His	Thr	His	Ser	His	Thr	His	Ser	His	Val	Glu	Gly	Lys	485	490	495
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<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

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<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

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<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

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<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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gcctgggtgt tctccttctt ggtcctggaa gtcacatctg tgttgaggag 200

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<210> 124

<211> 1184

<212> PRT

<213> Homo sapiens

<400> 124

Met	Val	Gly	Thr	Lys	Ala	Trp	Val	Phe	Ser	Phe	Leu	Val	Leu	Glu	1	5	10	15
Val	Thr	Ser	Val	Leu	Gly	Arg	Gln	Thr	Met	Leu	Thr	Gln	Ser	Val	20	25	30	
Arg	Arg	Val	Gln	Pro	Gly	Lys	Lys	Asn	Pro	Ser	Ile	Phe	Ala	Lys	35	40	45	
Pro	Ala	Asp	Thr	Leu	Glu	Ser	Pro	Gly	Glu	Trp	Thr	Thr	Trp	Phe	50	55	60	
Asn	Ile	Asp	Tyr	Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp	65	70	75	
Ala	Ile	Arg	Phe	Tyr	Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu	80	85	90	
Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr	95	100	105	
Gly	Gln	Val	Val	His	Gly	Ser	Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu	110	115	120	
Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val	125	130	135	
Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg	140	145	150	
Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys	155	160	165	
Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	Cys	Leu	Ala	Glu	170	175	180	
Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	Gln	His	Cys	185	190	195	
Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	Met	Gly	200	205	210	

Gln	Val	Asn	Ala	Asp	Cys	Asp	Ala	Cys	Met	Cys	Gln	Asp	Phe	Met
				215					220					225
Leu	His	Gly	Ala	Val	Ser	Leu	Pro	Gly	Gly	Ala	Pro	Ala	Ser	Gly
				230					235					240
Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln
				245					250					255
Thr	Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp
				260					265					270
Gly	Lys	Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile
				275					280					285
Val	Leu	Thr	Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys
				290					295					300
Ala	Glu	Phe	Val	Arg	Ala	Glu	Thr	Pro	Tyr	Met	Val	Met	Asn	Pro
				305					310					315
Glu	Thr	Lys	Ala	Arg	Arg	Ala	Gly	Gln	Ser	Val	Ser	Leu	Cys	Cys
				320					325					330
Lys	Ala	Thr	Gly	Lys	Pro	Arg	Pro	Asp	Lys	Tyr	Phe	Trp	Tyr	His
				335					340					345
Asn	Asp	Thr	Leu	Leu	Asp	Pro	Ser	Leu	Tyr	Lys	His	Glu	Ser	Lys
				350					355					360
Leu	Val	Leu	Arg	Lys	Leu	Gln	Gln	His	Gln	Ala	Gly	Glu	Tyr	Phe
				365					370					375
Cys	Lys	Ala	Gln	Ser	Asp	Ala	Gly	Ala	Val	Lys	Ser	Lys	Val	Ala
				380					385					390
Gln	Leu	Ile	Val	Thr	Ala	Ser	Asp	Glu	Thr	Pro	Cys	Asn	Pro	Val
				395					400					405
Pro	Glu	Ser	Tyr	Leu	Ile	Arg	Leu	Pro	His	Asp	Cys	Phe	Gln	Asn
				410					415					420
Ala	Thr	Asn	Ser	Phe	Tyr	Tyr	Asp	Val	Gly	Arg	Cys	Pro	Val	Lys
				425					430					435
Thr	Cys	Ala	Gly	Gln	Gln	Asp	Asn	Gly	Ile	Arg	Cys	Arg	Asp	Ala
				440					445					450
Val	Gln	Asn	Cys	Cys	Gly	Ile	Ser	Lys	Thr	Glu	Glu	Arg	Glu	Ile
				455					460					465
Gln	Cys	Ser	Gly	Tyr	Thr	Leu	Pro	Thr	Lys	Val	Ala	Lys	Glu	Cys
				470					475					480
Ser	Cys	Gln	Arg	Cys	Thr	Glu	Thr	Arg	Ser	Ile	Val	Arg	Gly	Arg
				485					490					495
Val	Ser	Ala	Ala	Asp	Asn	Gly	Glu	Pro	Met	Arg	Phe	Gly	His	Val
				500					505					510
Tyr	Met	Gly	Asn	Ser	Arg	Val	Ser	Met	Thr	Gly	Tyr	Lys	Gly	Thr
				515					520					525

Phe	Thr	Leu	His	Val	Pro	Gln	Asp	Thr	Glu	Arg	Leu	Val	Leu	Thr	530	535	540
Phe	Val	Asp	Arg	Leu	Gln	Lys	Phe	Val	Asn	Thr	Thr	Lys	Val	Leu	545	550	555
Pro	Phe	Asn	Lys	Lys	Gly	Ser	Ala	Val	Phe	His	Glu	Ile	Lys	Met	560	565	570
Leu	Arg	Arg	Lys	Glu	Pro	Ile	Thr	Leu	Glu	Ala	Met	Glu	Thr	Asn	575	580	585
Ile	Ile	Pro	Leu	Gly	Glu	Val	Val	Gly	Glu	Asp	Pro	Met	Ala	Glu	590	595	600
Leu	Glu	Ile	Pro	Ser	Arg	Ser	Phe	Tyr	Arg	Gln	Asn	Gly	Glu	Pro	605	610	615
Tyr	Ile	Gly	Lys	Val	Lys	Ala	Ser	Val	Thr	Phe	Leu	Asp	Pro	Arg	620	625	630
Asn	Ile	Ser	Thr	Ala	Thr	Ala	Ala	Gln	Thr	Asp	Leu	Asn	Phe	Ile	635	640	645
Asn	Asp	Glu	Gly	Asp	Thr	Phe	Pro	Leu	Arg	Thr	Tyr	Gly	Met	Phe	650	655	660
Ser	Val	Asp	Phe	Arg	Asp	Glu	Val	Thr	Ser	Glu	Pro	Leu	Asn	Ala	665	670	675
Gly	Lys	Val	Lys	Val	His	Leu	Asp	Ser	Thr	Gln	Val	Lys	Met	Pro	680	685	690
Glu	His	Ile	Ser	Thr	Val	Lys	Leu	Trp	Ser	Leu	Asn	Pro	Asp	Thr	695	700	705
Gly	Leu	Trp	Glu	Glu	Glu	Gly	Asp	Phe	Lys	Phe	Glu	Asn	Gln	Arg	710	715	720
Arg	Asn	Lys	Arg	Glu	Asp	Arg	Thr	Phe	Leu	Val	Gly	Asn	Leu	Glu	725	730	735
Ile	Arg	Glu	Arg	Arg	Leu	Phe	Asn	Leu	Asp	Val	Pro	Glu	Ser	Arg	740	745	750
Arg	Cys	Phe	Val	Lys	Val	Arg	Ala	Tyr	Arg	Ser	Glu	Arg	Phe	Leu	755	760	765
Pro	Ser	Glu	Gln	Ile	Gln	Gly	Val	Val	Ile	Ser	Val	Ile	Asn	Leu	770	775	780
Glu	Pro	Arg	Thr	Gly	Phe	Leu	Ser	Asn	Pro	Arg	Ala	Trp	Gly	Arg	785	790	795
Phe	Asp	Ser	Val	Ile	Thr	Gly	Pro	Asn	Gly	Ala	Cys	Val	Pro	Ala	800	805	810
Phe	Cys	Asp	Asp	Gln	Ser	Pro	Asp	Ala	Tyr	Ser	Ala	Tyr	Val	Leu	815	820	825
Ala	Ser	Leu	Ala	Gly	Glu	Glu	Leu	Gln	Ala	Val	Glu	Ser	Ser	Pro	830	835	840

Lys	Phe	Asn	Pro	Asn	Ala	Ile	Gly	Val	Pro	Gln	Pro	Tyr	Leu	Asn	
				845					850					855	
Lys	Leu	Asn	Tyr	Arg	Arg	Thr	Asp	His	Glu	Asp	Pro	Arg	Val	Lys	
				860					865					870	
Lys	Thr	Ala	Phe	Gln	Ile	Ser	Met	Ala	Lys	Pro	Arg	Pro	Asn	Ser	
				875					880					885	
Ala	Glu	Glu	Ser	Asn	Gly	Pro	Ile	Tyr	Ala	Phe	Glu	Asn	Leu	Arg	
				890					895					900	
Ala	Cys	Glu	Glu	Ala	Pro	Pro	Ser	Ala	Ala	His	Phe	Arg	Phe	Tyr	
				905					910					915	
Gln	Ile	Glu	Gly	Asp	Arg	Tyr	Asp	Tyr	Asn	Thr	Val	Pro	Phe	Asn	
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Glu	Asp	Asp	Pro	Met	Ser	Trp	Thr	Glu	Asp	Tyr	Leu	Ala	Trp	Trp	
				935					940					945	
Pro	Lys	Pro	Met	Glu	Phe	Arg	Ala	Cys	Tyr	Ile	Lys	Val	Lys	Ile	
				950					955					960	
Val	Gly	Pro	Leu	Glu	Val	Asn	Val	Arg	Ser	Arg	Asn	Met	Gly	Gly	
				965					970					975	
Thr	His	Arg	Arg	Thr	Val	Gly	Lys	Leu	Tyr	Gly	Ile	Arg	Asp	Val	
				980					985					990	
Arg	Ser	Thr	Arg	Asp	Arg	Asp	Gln	Pro	Asn	Val	Ser	Ala	Ala	Cys	
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Leu	Glu	Phe	Lys	Cys	Ser	Gly	Met	Leu	Tyr	Asp	Gln	Asp	Arg	Val	
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Ala	Ser	Val	Asn	Pro	Met	Leu	His	Glu	Tyr	Leu	Val	Asn	His	Leu	
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Pro	Leu	Ala	Val	Asn	Asn	Asp	Thr	Ser	Glu	Tyr	Thr	Met	Leu	Ala	
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Phe	Asp	Gly	Thr	Ser	Asp	Gly	Ser	Ser	Arg	Ile	Met	Lys	Ser	Asn	
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Val	Gly	Val	Ala	Leu	Thr	Phe	Asn	Cys	Val	Glu	Arg	Gln	Val	Gly	
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Arg	Gln	Ser	Ala	Phe	Gln	Tyr	Leu	Gln	Ser	Thr	Pro	Ala	Gln	Ser	
				1130					1135					1140	
Pro	Ala	Ala	Gly	Thr	Val	Gln	Gly	Arg	Val	Pro	Ser	Arg	Arg	Gln	
				1145					1150					1155	

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala  
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Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn  
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<210> 125  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 125  
 ctggtgcctc aacagggagc ag 22

<210> 126  
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 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 126  
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<210> 127  
 <211> 40  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 127  
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<210> 128  
 <211> 2819  
 <212> DNA  
 <213> Homo sapiens

<400> 128  
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 ttgggatctg ctttgagggtc ccatottcat ttaaaaaaaaa atacagagac 150  
 ctacctaccg gtaacgatac atacatatgt gtatatatat gtaaactaga 200  
 caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250  
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 attatgattt gtgtaagact cagatttaca cggaagaagg gaaagtttgg 400  
 gattacatgg cctgccagcc ggaatccaag gacatgacaa aatatctgaa 450

agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500  
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acgaatttag ttcccaggaa gatggattga tgttcactag cttggacaac 2750  
ttctgcaaaa tatgagacta tttccacttg ggaaaaatta caacagcaaa 2800  
aaaaaaaaa aaaaaaaaaa 2819

<210> 129  
<211> 438  
<212> PRT  
<213> Homo sapiens

<400> 129  
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Val Ser Ser Val Met Gln Pro Tyr Pro Leu Val Trp Gly His Tyr  
20 25 30  
Asp Leu Cys Lys Thr Gln Ile Tyr Thr Glu Glu Gly Lys Val Trp  
35 40 45  
Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr  
50 55 60  
Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro  
65 70 75  
Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn  
80 85 90  
Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu  
95 100 105  
Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser  
110 115 120  
Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr



125										130					135				
Leu	Ser	Trp	Ser	Lys	Thr	Ile	Glu	Leu	Thr	Asp	Asn	Ile	Val	Ile					
				140					145					150					
Thr	Phe	Glu	Ser	Gly	Arg	Pro	Asp	Gln	Met	Ile	Leu	Glu	Lys	Ser					
				155					160					165					
Leu	Asp	Tyr	Gly	Arg	Thr	Trp	Gln	Pro	Tyr	Gln	Tyr	Tyr	Ala	Thr					
				170					175					180					
Asp	Cys	Leu	Asp	Ala	Phe	His	Met	Asp	Pro	Lys	Ser	Val	Lys	Asp					
				185					190					195					
Leu	Ser	Gln	His	Thr	Val	Leu	Glu	Ile	Ile	Cys	Thr	Glu	Glu	Tyr					
				200					205					210					
Ser	Thr	Gly	Tyr	Thr	Thr	Asn	Ser	Lys	Ile	Ile	His	Phe	Glu	Ile					
				215					220					225					
Lys	Asp	Arg	Phe	Ala	Leu	Phe	Ala	Gly	Pro	Arg	Leu	Arg	Asn	Met					
				230					235					240					
Ala	Ser	Leu	Tyr	Gly	Gln	Leu	Asp	Thr	Thr	Lys	Lys	Leu	Arg	Asp					
				245					250					255					
Phe	Phe	Thr	Val	Thr	Asp	Leu	Arg	Ile	Arg	Leu	Leu	Arg	Pro	Ala					
				260					265					270					
Val	Gly	Glu	Ile	Phe	Val	Asp	Glu	Leu	His	Leu	Ala	Arg	Tyr	Phe					
				275					280					285					
Tyr	Ala	Ile	Ser	Asp	Ile	Lys	Val	Arg	Gly	Arg	Cys	Lys	Cys	Asn					
				290					295					300					
Leu	His	Ala	Thr	Val	Cys	Val	Tyr	Asp	Asn	Ser	Lys	Leu	Thr	Cys					
				305					310					315					
Glu	Cys	Glu	His	Asn	Thr	Thr	Gly	Pro	Asp	Cys	Gly	Lys	Cys	Lys					
				320					325					330					
Lys	Asn	Tyr	Gln	Gly	Arg	Pro	Trp	Ser	Pro	Gly	Ser	Tyr	Leu	Pro					
				335					340					345					
Ile	Pro	Lys	Gly	Thr	Ala	Asn	Thr	Cys	Ile	Pro	Ser	Ile	Ser	Ser					
				350					355					360					
Ile	Gly	Thr	Asn	Val	Cys	Asp	Asn	Glu	Leu	Leu	His	Cys	Gln	Asn					
				365					370					375					
Gly	Gly	Thr	Cys	His	Asn	Asn	Val	Arg	Cys	Leu	Cys	Pro	Ala	Ala					
				380					385					390					
Tyr	Thr	Gly	Ile	Leu	Cys	Glu	Lys	Leu	Arg	Cys	Glu	Glu	Ala	Gly					
				395					400					405					
Ser	Cys	Gly	Ser	Asp	Ser	Gly	Gln	Gly	Ala	Pro	Pro	His	Gly	Thr					
				410					415					420					
Pro	Ala	Leu	Leu	Leu	Leu	Thr	Thr	Leu	Leu	Gly	Thr	Ala	Ser	Pro					
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Leu	Val	Phe																	

<210> 130  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 130  
tcgattatgg acgaacatgg cagc 24

<210> 131  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 131  
ttctgagatc cctcatcctc 20

<210> 132  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 132  
aggttcaggg acagcaagtt tggg 24

<210> 133  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 133  
tttgctggac ctcggtacg gaattggctt ccctctacgg acagctggat 50

<210> 134  
<211> 1493  
<212> DNA  
<213> Homo sapiens

<400> 134  
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ccgggcgagg tgtcctcatg acttctcttg tggaccatgt ccgtgatctt 150  
ttttgcctgc gtggtacggg taagggatgg actgcccctc tcagcctcta 200  
ctgattttta ccacaccaa gatttttttg aatggaggag acggctcaag 250  
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 accctgtggt gggaattcac agcttcctat gacactacct gcattggcct 450  
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 tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagcttg 550  
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 tattcgtttt caatacttgc tgttcatgtt acacaagctt cttacggttt 1300  
 tcttgtaaca ataaatattt tgagtaata atgggtacat tttacaaaac 1350  
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400  
 tttatatact atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450  
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135

<211> 228

<212> PRT

<213> Homo sapiens

<400> 135

Met	Ser	Val	Ile	Phe	Phe	Ala	Cys	Val	Val	Arg	Val	Arg	Asp	Gly
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				20					25					30
Leu	Glu	Trp	Arg	Arg	Arg	Leu	Lys	Ser	Leu	Ala	Leu	Arg	Leu	Ala
				35					40					45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	50	55	60
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	65	70	75
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	80	85	90
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	95	100	105
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	110	115	120
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	125	130	135
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	140	145	150
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	155	160	165
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	170	175	180
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	185	190	195
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	200	205	210
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	215	220	225

Gln Thr Ser

<210> 136

<211> 239

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 39, 61, 143, 209

<223> unknown base

<400> 136

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ctgcattggc ntagcctcca ggccatacgc ttttcttgag tttgacagca 100

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ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137

<211> 2300

<212> DNA

<213> Homo sapiens

<400> 137

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ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgtcc 150  
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200  
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gctgagttca ccacagtggg tgatgaagat gccacgtca acaagattgc 500  
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<210> 138  
 <211> 489  
 <212> PRT  
 <213> Homo sapiens

<400> 138

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Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
			20						25					30
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
			35						40					45
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
			50						55					60
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
			65						70					75
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
			80						85					90
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
			95						100					105
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
			110						115					120
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr

125										130					135				
Glu	Ser	Glu	Gly	Phe	Ala	Gly	Ser	Arg	Lys	Gly	Val	Leu	Gly	Arg					
				140					145					150					
Val	Tyr	Glu	Thr	Val	Val	Met	Leu	Met	Leu	Leu	Thr	Leu	Leu	Val					
				155					160					165					
Leu	Gly	Met	Val	Trp	Val	Ala	Ser	Ala	Ile	Val	Asp	Lys	Asn	Lys					
				170					175					180					
Ala	Asn	Arg	Glu	Ser	Leu	Tyr	Asp	Phe	Trp	Glu	Tyr	Tyr	Leu	Pro					
				185					190					195					
Tyr	Leu	Tyr	Ser	Cys	Ile	Ser	Phe	Leu	Gly	Val	Leu	Leu	Leu	Leu					
				200					205					210					
Val	Cys	Thr	Pro	Leu	Gly	Leu	Ala	Arg	Met	Phe	Ser	Val	Thr	Gly					
				215					220					225					
Lys	Leu	Leu	Val	Lys	Pro	Arg	Leu	Leu	Glu	Asp	Leu	Glu	Glu	Gln					
				230					235					240					
Leu	Tyr	Cys	Ser	Ala	Phe	Glu	Glu	Ala	Ala	Leu	Thr	Arg	Arg	Ile					
				245					250					255					
Cys	Asn	Pro	Thr	Ser	Cys	Trp	Leu	Pro	Leu	Asp	Met	Glu	Leu	Leu					
				260					265					270					
His	Arg	Gln	Val	Leu	Ala	Leu	Gln	Thr	Gln	Arg	Val	Leu	Leu	Glu					
				275					280					285					
Lys	Arg	Arg	Lys	Ala	Ser	Ala	Trp	Gln	Arg	Asn	Leu	Gly	Tyr	Pro					
				290					295					300					
Leu	Ala	Met	Leu	Cys	Leu	Leu	Val	Leu	Thr	Gly	Leu	Ser	Val	Leu					
				305					310					315					
Ile	Val	Ala	Ile	His	Ile	Leu	Glu	Leu	Leu	Ile	Asp	Glu	Ala	Ala					
				320					325					330					
Met	Pro	Arg	Gly	Met	Gln	Gly	Thr	Ser	Leu	Gly	Gln	Val	Ser	Phe					
				335					340					345					
Ser	Lys	Leu	Gly	Ser	Phe	Gly	Ala	Val	Ile	Gln	Val	Val	Leu	Ile					
				350					355					360					
Phe	Tyr	Leu	Met	Val	Ser	Ser	Val	Val	Gly	Phe	Tyr	Ser	Ser	Pro					
				365					370					375					
Leu	Phe	Arg	Ser	Leu	Arg	Pro	Arg	Trp	His	Asp	Thr	Ala	Met	Thr					
				380					385					390					
Gln	Ile	Ile	Gly	Asn	Cys	Val	Cys	Leu	Leu	Val	Leu	Ser	Ser	Ala					
				395					400					405					
Leu	Pro	Val	Phe	Ser	Arg	Thr	Leu	Gly	Leu	Thr	Arg	Phe	Asp	Leu					
				410					415					420					
Leu	Gly	Asp	Phe	Gly	Arg	Phe	Asn	Trp	Leu	Gly	Asn	Phe	Tyr	Ile					
				425					430					435					
Val	Phe	Leu	Tyr	Asn	Ala	Ala	Phe	Ala	Gly	Leu	Thr	Thr	Leu	Cys					

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val	Arg Ala Glu Leu Ile	Arg
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu	Pro Val Ser Gly Phe	Pro
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139  
 <211> 294  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 53, 57  
 <223> unknown base

<400> 139  
 ggctgccgag ggaaggcccc ttgggttggt cttggttgct tggcggcggc 50  
 ggnttcntcc ccgctcgcc tccccgggcc cagaggcacc tcggcttcag 100  
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150  
 gagaacagct attccacgag aggatccgog agtgtattat atcaaacactt 200  
 ctgtttgcaa cactgtacat cctctgccac atcttctctga cccgcttcaa 250  
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140  
 <211> 526  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 197, 349  
 <223> unknown base

<400> 140  
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50  
 aggcggtggt gcctgccctt taagggcggg gcgtccggac gactgtatct 100  
 gagccccaga ctgccccgag tttctgtcgc aggctgcgag gaaaggcccc 150  
 taggctgggt ctggtgcttg gcggcgggcg cttctctccc gttgtcntcc 200  
 ccggggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250  
 cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300  
 atccgcgagt gtattatata aacacttctg ttgcaaacac tgtacatcnt 350  
 ctgccacatc ttctgacctt gcttcaagaa gcctgctgag ttcaccacag 400  
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450



tttaccctgg caattgccct ggggtgctgc ctgctcctgc ccttctccat 500

catcagcaat gaggtgctgc actccc 526

<210> 141

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 141

gactgtatct gagccccaga ctgc 24

<210> 142

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 142

tcagcaatga ggtgctgctc 20

<210> 143

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 143

tgaggaagat gagggacagg ttgg 24

<210> 144

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 144

tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145

<211> 685

<212> DNA

<213> Homo sapiens

<400> 145

gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50

caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100

tggtccaggt cttcatgctg ctgtgggtga tattactggc cctggctcct 150

gtcagtggac agtttgcaag gacaccagc cccattatct tccctccagcc 200

tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300  
 gggaaagaaa tactaagaga aaccccagac aatataccttg aggttcagga 350  
 atctggagag tacagatgcc aggcccaggg ctcccctctc agtagccctg 400  
 tgcacttgga tttttcttca gagatgggat ttctctcatgc tgcccaggct 450  
 aatgttgaac tcttgggctc aagtgatctg ctcacctagg cctctcaaag 500  
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550  
 aaggagactc tgttggttctg aggtgccggg caaaggcgga agtaacactg 600  
 aataatacta tttaacaagaa tgataatgtc ctggcattcc ttaataaaaag 650  
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 146  
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly  
 1 5 10 15  
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro  
 20 25 30  
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys  
 35 40 45  
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg  
 50 55 60  
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu  
 65 70 75  
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser  
 80 85 90  
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly  
 95 100 105  
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser  
 110 115 120  
 Asp Leu Leu Thr

<210> 147  
 <211> 1621  
 <212> DNA  
 <213> Homo sapiens

<400> 147  
 cagaagaggg ggctagctag ctgtctctgc ggaccagggg gacccccgcg 50  
 cccccccggt gtgaggcggc ctacacagggc cgggtgggct ggcgagccga 100  
 cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaacat ggctccgag aacctgagca ccttttgct gttgctgcta 200  
 tacctcatcg gggcggatg tgccggacga gatttctata agatcttggg 250  
 ggtgcctcga agtgccctta taaaggatat taaaaggcc tataggaaac 300  
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350  
 gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400  
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450  
 atcagagctc ccatggagac attttttcac acttctttgg ggattttggt 500  
 ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550  
 aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600  
 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650  
 ggcaaacgga agtgcaattg tcggcaagag atgcggaacca ccagctggg 700  
 ccctgggcgc ttccaaatga ccagggagg ggtctgcgac gaatgcccta 750  
 atgtcaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800  
 ggggtgagag acggcatgga gtaccccttt attggagaag gtgagcctca 850  
 cgtggatggg gagcctggag atttacggtt ccgaatcaaa gttgtcaagc 900  
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950  
 tcattagttg agtcactggt tggctttgag atggatatta ctacttga 1000  
 tggtcacaag gtacatattt cccgggataa gatcaccagg ccaggagcga 1050  
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100  
 aagggtcttt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150  
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200  
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250  
 gactttgttt aaaataagtg aataagcgat atttattatc tgcaaggttt 1300  
 ttttggtgt gttttgttt ttattttcaa tatgcaagtt aggtttaatt 1350  
 tttttatcta atgatcatca tgaaatgaat aagagggtt aagaatttgt 1400  
 ccatttgcat tcggaaaaga atgaccagca aaagggttac taatacctct 1450  
 ccctttgggg atttaatgtc tgggtgtgcc gcttgagttt caagaattaa 1500  
 agctgcaaga ggactccagg agcaaaagaa acacaatata gagggttgga 1550  
 gttgttagca atttcattca aaatgccaac tggagaagtc tgtttttaa 1600  
 tacattttgt tgttattttt a 1621

<210> 148  
 <211> 358  
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
1				5					10					15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys  
 305 310 315

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln  
 320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln  
 335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr  
 350 355

<210> 149  
 <211> 509  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,  
 482  
 <223> unknown base

<400> 149  
 tgggaccagg gaaccccgagg ccccccggtg gagngcctaa caggccggtg 50  
 gntgcgaccg aagcgggcggg cggaggaggt ttgaggatt ttggaacag 100  
 gacccggaca gaggaaccat ggttccgcag aacntgagca cnttttgcct 150  
 gttgntgnta tacttcatcg gggcggtgat tgccggacga gatttntata 200  
 agattttggg gtgcctngaa gtgcctnta taaaggatat taaaaaggcc 250  
 tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300  
 acaagcccag gagaaattcc aggatttggg tgctgcttat gaggttntgt 350  
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400  
 aaagatggtg atcagagctc ccatggagac attttttcac acttntttgg 450  
 ggattttggg ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500  
 ttccaagag 509

<210> 150  
 <211> 1532  
 <212> DNA  
 <213> Homo sapiens

<400> 150  
 ggcacgaggc ggcggggcag tcgcgggatg cgcgcgggag ccacagcctg 50  
 aggccctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100  
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150  
 gaccgggact gagtcaggag ccctctggaa gcatggagac tgtgtgtgatt 200  
 gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250  
 ggtgctgggt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagccatt gtggacctca ttggtgccat ggagaccag 350  
tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccca 400  
cattgaggcc attctggaga atgaagactg gatcgaagat gctcggggtc 450  
tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500  
aagcttggtg ccatgacaat gggctctggg gccaagatga agacttcagc 550  
cagtgtcagc gacatcattg tgggtggccaa gcggatcagc cccaggggtg 600  
atgatgttgt gaagtogatg taccctcctg tggaccccaa actcctggac 650  
gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgctggtgac 700  
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750  
tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800  
tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850  
gtctgcaatt tagtgccctac aggccagcag ctagccatga aggccctgc 900  
cgccatccct ggatggtcga gcttagcctt ctacttttcc ctatagagtt 950  
agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000  
gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050  
gagtggcagt ctaatactac agttagggga gatgccattc actctctgca 1100  
agaggagtat tgaaaactgg tggactgtca gctttattta gctcacctag 1150  
tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200  
taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250  
ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300  
tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350  
tgtattatct gcctggtccc tgaggcgtct gggctctctc tctcccttgc 1400  
aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450  
tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaattt 1500  
atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151  
<211> 226  
<212> PRT  
<213> Homo sapiens

<400> 151  
Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile  
1 5 10 15  
Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg  
20 25 30  
Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
	50	55	60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu		70	75
	65		
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu		85	90
	80		
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr		100	105
	95		
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys		115	120
	110		
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile		130	135
	125		
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu		145	150
	140		
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser		160	165
	155		
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr		175	180
	170		
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu		190	195
	185		
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp		205	210
	200		
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala		220	225
	215		
Ile			

<210> 152  
 <211> 1027  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 1017, 1020  
 <223> unknown base

<400> 152  
 gcttcatttc tcccgaactca gcttcccacc ctgggctttc cgagggtgctt 50  
 tcgccgctgt ccccaccact gcagccatga tctccttaac ggacacgcag 100  
 aaaattggaa tgggattaac aggatttga gtgtttttcc tgttctttgg 150  
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200  
 ttgtagccgg cttggctttt gtaattggtt tagaaagaac attcagattc 250  
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

attttagtagtc cttattgggtt ggcctttgat aggcatgatac ttcgaaattt 350  
 atggattttt tctcttggtc aggggcttct ttcctgtcgt tgttggcttt 400  
 attagaagag tgccagtcct tggatccctc ctaaatttac ctggaattag 450  
 atcatttgta gataaagttg gagaaagcaa caatatggta taacaacaag 500  
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550  
 agaattattca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600  
 tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650  
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700  
 caagcaaact gagagaggtg aaatccatgt taatgatgct taagaaaactc 750  
 ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800  
 ttagagaact gtggtgcctg tttcttttct tttatttttg aaggctcagg 850  
 agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900  
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950  
 ttgtgtcatt ttaaagtatt aaaaccaagg aaacccaat tttgatgtat 1000  
 ggattacttt tttttgngcn cagggcc 1027

<210> 153  
 <211> 138  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> N-myristoylation Sites  
 <222> 11-16, 51-56 and 116-121  
 <223> N-myristoylation Sites.

<220>  
 <221> Transmembrane domains  
 <222> 12-30, 33-52, 69-89 and 93-109  
 <223> Transmembrane domains

<220>  
 <221> Aminoacyl-transfer RNA Synthetases.  
 <222> 49-59  
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153  
 Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr  
 1 5 10 15  
 Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe  
 20 25 30  
 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly  
 35 40 45  
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe  
 50 55 60



Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val  
                     65                    70                    75  
 Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu  
                     80                    85                    90  
 Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val  
                     95                    100                    105  
 Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn  
                     110                    115                    120  
 Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn  
                     125                    130                    135  
 Asn Met Val

<210> 154  
 <211> 405  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 66  
 <223> unknown base

<400> 154  
 gaagacgtgg cggtctctgc ctgggctggt tcccggttc atttctcccg 50  
 actcagcttc ccacntggg ctttcogagg tgctttcgcc gctgtcccca 100  
 ccaactgcagc catgatctcc ttaacggaca cgcagaaaat tggaatggga 150  
 ttaaccggat ttggagtgtt tttcctgttc tttggaatga ttctcttttt 200  
 tgacaaagca ctactggcta ttggaaatgt tttatttgta gccggcttgg 250  
 cttttgtaat tggtttagaa agaacattca gattcttctt ccaaaaacat 300  
 aaaatgaaag ctacaggttt tttctgggt ggtgtatttg tagtccttat 350  
 tggttggcct ttgataggca tgatcttoga aatttatgga tttttctctt 400  
 tgttc 405

<210> 155  
 <211> 1781  
 <212> DNA  
 <213> Homo sapiens

<400> 155  
 ggcacgaggc tgaacccagc cggtccatc tcagcttctg gtttctaagt 50  
 ccatgtgcc aaggctgcc ggaaggagac gccttctga gtcctggatc 100  
 tttcttctt ctggaaatct ttgactgtgg gtagttattt atttctgaat 150  
 aagagcgtcc acgcatcatg gacctgcgg gactgctgaa gtctcagttc 200  
 ctgtgccacc tggctctctg ctacgtcttt attgcctcag ggctaatacat 250

caacaccatt cagctcttca ctctcctcct ctggcccaatt aacaagcagc 300  
 tcttccggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350  
 gtgatgctgc tggagtgggtg gtcggggcacg gaatgcacca tcttcacgga 400  
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<210> 156

<211> 378  
 <212> PRT  
 <213> Homo sapiens

<400> 156

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Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr	20	25	30	
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	35	40	45	
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	50	55	60	
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	65	70	75	
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	80	85	90	
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	95	100	105	
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	110	115	120	
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	125	130	135	
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	140	145	150	
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	155	160	165	
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	170	175	180	
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	185	190	195	
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	200	205	210	
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	215	220	225	
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	230	235	240	
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	245	250	255	
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	260	265	270	
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	275	280	285	
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val				

290	295	300
Pro Pro Arg Arg	Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp Ala
305	310	315
Ser Leu Val Leu	Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met Ile
320	325	330
Arg Ser Gly Ser	Ser Leu Thr Leu Ala	Ser Phe Ile Leu Val Phe
335	340	345
Phe Val Ala Ser	Val Gly Val Arg Trp	Met Ile Gly Val Thr Glu
350	355	360
Ile Asp Lys Gly	Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln Lys
365	370	375

Leu Asn Asp

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 <211> 1849  
 <212> DNA  
 <213> Homo sapiens

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 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200  
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250  
 gaagtaaatg agcaagcact gaagaaaata ttatcaaagt tcaaaaagaa 300  
 tgtggtaggt tggtaaaaat tccgtcgtca ttcagatcag atcatgacgt 350  
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400  
 gaccttgttt ttctgctatt aacaccaagt ataataacag aaagctgctc 450  
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 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700  
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 ttcatgtgtt atgtctttta aaaatagaca tgtttctaaa agtagctgta 950

actacaacca ccatctcgat gtagtagaca atctgacctt aatggtagaa 1000  
 cactactgaca ttctgaagc tagtccagct agtacaccac aaatcattaa 1050  
 gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcgg 1100  
 tgtagatac acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150  
 caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200  
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 tttaacctta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300  
 atttctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350  
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<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

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 20 25 30

Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile  
 35 40 45

Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp  
 50 55 60

Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn  
 65 70 75

Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser  
 80 85 90

Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His  
 95 100 105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn
				110					115					120
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu
				125					130					135
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu
				140					145					150
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro
				155					160					165
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys
				170					175					180
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val
				185					190					195
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys
				200					205					210
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu
				215					220					225
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val
				230					235					240
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu
				245					250					255
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile
				260					265					270
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg
				275					280					285
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser
				290					295					300
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His
				305					310					315
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr
				320					325					330
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys
				335					340					345
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser
				350					355					360
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly
				365					370					375
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr
				380					385					390
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Ser	Pro	Thr	Phe											

<210> 159  
<211> 2651  
<212> DNA  
<213> Homo sapiens

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 agcaggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650  
 c 2651

<210> 160  
 <211> 556  
 <212> PRT  
 <213> Homo sapiens

<400> 160  
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                     20                    25                    30  
 Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn



35					40					45				
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys
				50					55					60
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr
				65					70					75
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln
				80					85					90
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe
				95					100					105
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu
				110					115					120
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn
				125					130					135
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr
				140					145					150
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp
				155					160					165
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr
				170					175					180
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu
				185					190					195
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln
				200					205					210
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu
				215					220					225
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro
				230					235					240
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser
				245					250					255
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys
				260					265					270
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp
				275					280					285
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu
				290					295					300
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile
				305					310					315
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser
				320					325					330
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys
				335					340					345
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala

	350		355		360
Phe Ser Ala Arg	Phe Arg Pro His His	Pro Glu Glu Arg Pro	Thr		
	365		370		375
Thr Ala Ala Gly	Thr Ser Leu Asp Arg	Leu Val Thr Asp Val	Lys		
	380		385		390
Glu Lys Leu Lys	Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro	Ser		
	395		400		405
Asn Val Cys Asn	Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn	Glu		
	410		415		420
Asp Asp Cys Trp	Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe	Ala		
	425		430		435
Val Thr Gly Asn	Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu	Val		
	440		445		450
Gln Val Asp Thr	Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln	Ile		
	455		460		465
Met Ala Leu Arg	Val Met Thr Ser Lys	Met Lys Asn Ala Tyr	Asn		
	470		475		480
Gly Asn Asp Val	Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser	Gly		
	485		490		495
Glu Gly Ser Gly	Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser	Glu		
	500		505		510
Phe Asp Tyr Asn	Ala Thr Asp His Ala	Gly Lys Ser Ala Asn	Glu		
	515		520		525
Lys Ala Asp Ser	Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr	Leu		
	530		535		540
Leu Thr Val Phe	Cys Ile Leu Phe Leu	Val Met Gln Arg Glu	Trp		
	545		550		555

Arg

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<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 161

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<210> 162

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 162  
tcacatcgat gggatccatg accg 24

<210> 163  
<211> 50  
<212> DNA  
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<220>  
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<210> 164  
<211> 870  
<212> DNA  
<213> Homo sapiens

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ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150  
cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200  
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gtgagtgcaa agattggttc ctgagagccc cgagaagaaa attcatgaca 350  
gtgtctgggc tgccaaagaa gcagtgtccc tgtgatcatt tcaagggcaa 400  
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gccaaagaaga cagtgagcac acctaccaga cactcttctt ctcccacctc 600  
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ctgaaagatt ccaggaaact gtagcttcct agctagtgtc atttaacctt 800  
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tcaaaaaaaaa aaaaaaaaaa 870

<210> 165  
<211> 119  
<212> PRT  
<213> Homo sapiens

<400> 165  
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166  
 <211> 551  
 <212> DNA  
 <213> Homo sapiens

<400> 166  
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 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150  
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200  
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<210> 167  
 <211> 87  
 <212> PRT  
 <213> Homo sapiens

<400> 167  
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 1 5 10 15  
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe					
	35		40		45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala					
	50		55		60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met					
	65		70		75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys					
	80		85		

<210> 168  
 <211> 1371  
 <212> DNA  
 <213> Homo sapiens

<400> 168  
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 gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150  
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 aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtgg 450  
 ctcttgagga ggacatgaga cagctggctg atggctccat ggatgtggtg 500  
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 gacagtgaaa aagctctact tctacgtga cccagggagg aaacactagg 1050  
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tcatgggtgcc tgcattccctg ccaagccccc ctgacctctt ctccccacta 1250  
ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300  
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taataaatag acgaaaccac g 1371

<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

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Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro	20	25	30	
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	35	40	45	
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	50	55	60	
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	65	70	75	
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	80	85	90	
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	95	100	105	
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	110	115	120	
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	125	130	135	
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	140	145	150	
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	155	160	165	
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	170	175	180	
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	185	190	195	
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	200	205	210	
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	215	220	225	

Pro	Pro	Pro	Leu	Lys	Trp	Leu	Pro	Val	Gly	Pro	His	Ile	Met	Gly
				230					235					240
Lys	Ala	Val	Lys	Gln	Ser	Phe	Pro	Ser	Ser	Lys	Ala	Leu	Ile	Cys
				245					250					255
Ser	Phe	Pro	Ser	Leu	Gln	Leu	Glu	Gln	Ala	Thr	His	Gln	Pro	Ile
				260					265					270
Tyr	Leu	Pro	Leu	Arg	Gly	Thr								
				275										

<210> 170  
 <211> 1621  
 <212> DNA  
 <213> Homo sapiens

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 agatgtcatt ccgtaaagta aacatcatca tcttggctct ggctgtttgct 200  
 ctcttcttac tggttttgca ccataacttc ctcagcttga gcagtttggt 250  
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 gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800  
 aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850  
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 aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000  
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 tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200  
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<210> 171

<211> 371

<212> PRT

<213> Homo sapiens

<400> 171

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				20					25					30
Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro
				35					40					45
Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp
				50					55					60
Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp
				65					70					75
Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn
				80					85					90
Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr
				95					100					105
Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser
				110					115					120
Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly
				125					130					135
Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu
				140					145					150
Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys
				155					160					165
Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile
				170					175					180
Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala



185										190					195				
Phe	Ser	Glu	Asp	Cys	Asp	Ser	Ala	Ser	Thr	Lys	Val	Val	Ile	Arg					
200										205					210				
Gly	Ala	Gly	Asn	Gln	Tyr	Asn	Tyr	Ile	Gly	Tyr	Leu	Asp	Tyr	Lys					
215										220					225				
Lys	Glu	Arg	Ile	Arg	Lys	Leu	Ser	Met	Lys	Ala	Ser	Thr	Cys	Ser					
230										235					240				
Phe	Asn	Pro	Gly	Val	Phe	Val	Ala	Asn	Leu	Thr	Glu	Trp	Lys	Arg					
245										250					255				
Gln	Asn	Ile	Thr	Asn	Gln	Leu	Glu	Lys	Trp	Met	Lys	Leu	Asn	Val					
260										265					270				
Glu	Glu	Gly	Leu	Tyr	Ser	Arg	Thr	Leu	Ala	Gly	Ser	Ile	Thr	Thr					
275										280					285				
Pro	Pro	Leu	Leu	Ile	Val	Phe	Tyr	Gln	Gln	His	Ser	Thr	Ile	Asp					
290										295					300				
Pro	Met	Trp	Asn	Val	Arg	His	Leu	Gly	Ser	Ser	Ala	Gly	Lys	Arg					
305										310					315				
Tyr	Ser	Pro	Gln	Phe	Val	Lys	Ala	Ala	Lys	Leu	Leu	His	Trp	Asn					
320										325					330				
Gly	His	Leu	Lys	Pro	Trp	Gly	Arg	Thr	Ala	Ser	Tyr	Thr	Asp	Val					
335										340					345				
Trp	Glu	Lys	Trp	Tyr	Ile	Pro	Asp	Pro	Thr	Gly	Lys	Phe	Asn	Leu					
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Ile	Arg	Arg	Tyr	Thr	Glu	Ile	Ser	Asn	Ile	Lys									
365										370									

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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gcattcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250
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aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400  
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<210> 173

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 173

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 aaaaaaaaaa aaaaaa 1866

<210> 174  
 <211> 823  
 <212> DNA  
 <213> Homo sapiens

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 actccagccc tggccctgtt cctgagaagg cccaccacc ccagaagccc 350  
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 tggagcccag gacctaatc cacctcacct agagcctgga attaggatcc 450  
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 gccgggtcca ctctttccct aggtgagca cctctaggcc ctctaggttg 700  
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ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

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Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Leu Trp Val Ile Leu  
20 25 30

Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu  
35 40 45

Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro  
50 55 60

His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser  
65 70 75

Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr  
80 85

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

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tgtccctcaa acacctgagt gctactccct atttgcattt gttttgataa 150

atgatgttga caccctccac cgaattotaa gtggaatcat gtcgggaaga 200

gatacaatcc ttggcctgtg tatcctcgca ttagccttgt ctttggccat 250

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aaatatgaag tgcgtgctgg ggtttgctat cgtatccaca ggcattcacgg 450

cagtgtgct cgtcttgatt tttgtttotca gaaagagaat aaaattgaca 500

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gctgttccag ccactgtgga catttgccat cctcattttc ttctgggtcc 600

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 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600  
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<210> 177

<211> 445

<212> PRT

<213> Homo sapiens

<400> 177

Met	Ser	Gly	Arg	Asp	Thr	Ile	Leu	Gly	Leu	Cys	Ile	Leu	Ala	Leu
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Ala	Leu	Ser	Leu	Ala	Met	Met	Phe	Thr	Phe	Arg	Phe	Ile	Thr	Thr
				20					25					30
Leu	Leu	Val	His	Ile	Phe	Ile	Ser	Leu	Val	Ile	Leu	Gly	Leu	Leu
				35					40					45
Phe	Val	Cys	Gly	Val	Leu	Trp	Trp	Leu	Tyr	Tyr	Asp	Tyr	Thr	Asn
				50					55					60
Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys	Cys
				65					70					75
Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val	Leu
				80					85					90
Leu	Val	Leu	Ile	Phe	Val	Leu	Arg	Lys	Arg	Ile	Lys	Leu	Thr	Val

95					100					105				
Glu	Leu	Phe	Gln	Ile	Thr	Asn	Lys	Ala	Ile	Ser	Ser	Ala	Pro	Phe
				110					115					120
Leu	Leu	Phe	Gln	Pro	Leu	Trp	Thr	Phe	Ala	Ile	Leu	Ile	Phe	Phe
				125					130					135
Trp	Val	Leu	Trp	Val	Ala	Val	Leu	Leu	Ser	Leu	Gly	Thr	Ala	Gly
				140					145					150
Ala	Ala	Gln	Val	Met	Glu	Gly	Gly	Gln	Val	Glu	Tyr	Lys	Pro	Leu
				155					160					165
Ser	Gly	Ile	Arg	Tyr	Met	Trp	Ser	Tyr	His	Leu	Ile	Gly	Leu	Ile
				170					175					180
Trp	Thr	Ser	Glu	Phe	Ile	Leu	Ala	Cys	Gln	Gln	Met	Thr	Ile	Ala
				185					190					195
Gly	Ala	Val	Val	Thr	Cys	Tyr	Phe	Asn	Arg	Ser	Lys	Asn	Asp	Pro
				200					205					210
Pro	Asp	His	Pro	Ile	Leu	Ser	Ser	Leu	Ser	Ile	Leu	Phe	Phe	Tyr
				215					220					225
His	Gln	Gly	Thr	Val	Val	Lys	Gly	Ser	Phe	Leu	Ile	Ser	Val	Val
				230					235					240
Arg	Ile	Pro	Arg	Ile	Ile	Val	Met	Tyr	Met	Gln	Asn	Ala	Leu	Lys
				245					250					255
Glu	Gln	Gln	His	Gly	Ala	Leu	Ser	Arg	Tyr	Leu	Phe	Arg	Cys	Cys
				260					265					270
Tyr	Cys	Cys	Phe	Trp	Cys	Leu	Asp	Lys	Tyr	Leu	Leu	His	Leu	Asn
				275					280					285
Gln	Asn	Ala	Tyr	Thr	Thr	Thr	Ala	Ile	Asn	Gly	Thr	Asp	Phe	Cys
				290					295					300
Thr	Ser	Ala	Lys	Asp	Ala	Phe	Lys	Ile	Leu	Ser	Lys	Asn	Ser	Ser
				305					310					315
His	Phe	Thr	Ser	Ile	Asn	Cys	Phe	Gly	Asp	Phe	Ile	Ile	Phe	Leu
				320					325					330
Gly	Lys	Val	Leu	Val	Val	Cys	Phe	Thr	Val	Phe	Gly	Gly	Leu	Met
				335					340					345
Ala	Phe	Asn	Tyr	Asn	Arg	Ala	Phe	Gln	Val	Trp	Ala	Val	Pro	Leu
				350					355					360
Leu	Leu	Val	Ala	Phe	Phe	Ala	Tyr	Leu	Val	Ala	His	Ser	Phe	Leu
				365					370					375
Ser	Val	Phe	Glu	Thr	Val	Leu	Asp	Ala	Leu	Phe	Leu	Cys	Phe	Ala
				380					385					390
Val	Asp	Leu	Glu	Thr	Asn	Asp	Gly	Ser	Ser	Glu	Lys	Pro	Tyr	Phe
				395					400					405
Met	Asp	Gln	Glu	Phe	Leu	Ser	Phe	Val	Lys	Arg	Ser	Asn	Lys	Leu

	410	415	420
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Glu Gly Thr Glu	Leu Gln Ala Ile Val Arg		
	440	445	

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 <211> 2773  
 <212> DNA  
 <213> Homo sapiens

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<210> 179



<211> 678  
 <212> PRT  
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met	1	5	10	15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr	20	25	30	
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	35	40	45	
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	50	55	60	
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly	65	70	75	
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val	80	85	90	
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	95	100	105	
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	110	115	120	
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	125	130	135	
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	140	145	150	
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	155	160	165	
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	170	175	180	
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	185	190	195	
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	200	205	210	
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	215	220	225	
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	230	235	240	
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	245	250	255	
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	260	265	270	
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	275	280	285	
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly				

	290	295	300
Ser Thr Ser Ile	Gly 305	Lys Arg Arg Phe Arg 310	Ile Gln Lys Gln Leu 315
Leu Ala Asp Val	Ala 320	Gln Ala Leu Asp Ile 325	Gly Pro Ala Gly Pro 330
Leu Met Gly Val	Val 335	Gln Tyr Gly Asp Asn 340	Pro Ala Thr His Phe 345
Asn Leu Lys Thr	His 350	Thr Asn Ser Arg Asp 355	Leu Lys Thr Ala Ile 360
Glu Lys Ile Thr	Gln 365	Arg Gly Gly Leu Ser 370	Asn Val Gly Arg Ala 375
Ile Ser Phe Val	Thr 380	Lys Asn Phe Phe Ser 385	Lys Ala Asn Gly Asn 390
Arg Ser Gly Ala	Pro 395	Asn Val Val Val Val 400	Met Val Asp Gly Trp 405
Pro Thr Asp Lys	Val 410	Glu Glu Ala Ser Arg 415	Leu Ala Arg Glu Ser 420
Gly Ile Asn Ile	Phe 425	Phe Ile Thr Ile Glu 430	Gly Ala Ala Glu Asn 435
Glu Lys Gln Tyr	Val 440	Val Glu Pro Asn Phe 445	Ala Asn Lys Ala Val 450
Cys Arg Thr Asn	Gly 455	Phe Tyr Ser Leu His 460	Val Gln Ser Trp Phe 465
Gly Leu His Lys	Thr 470	Leu Gln Pro Leu Val 475	Lys Arg Val Cys Asp 480
Thr Asp Arg Leu	Ala 485	Cys Ser Lys Thr Cys 490	Leu Asn Ser Ala Asp 495
Ile Gly Phe Val	Ile 500	Asp Gly Ser Ser Ser 505	Val Gly Thr Gly Asn 510
Phe Arg Thr Val	Leu 515	Gln Phe Val Thr Asn 520	Leu Thr Lys Glu Phe 525
Glu Ile Ser Asp	Thr 530	Asp Thr Arg Ile Gly 535	Ala Val Gln Tyr Thr 540
Tyr Glu Gln Arg	Leu 545	Glu Phe Gly Phe Asp 550	Lys Tyr Ser Ser Lys 555
Pro Asp Ile Leu	Asn 560	Ala Ile Lys Arg Val 565	Gly Tyr Trp Ser Gly 570
Gly Thr Ser Thr	Gly 575	Ala Ala Ile Asn Phe 580	Ala Leu Glu Gln Leu 585
Phe Lys Lys Ser	Lys 590	Pro Asn Lys Arg Lys 595	Leu Met Ile Leu Ile 600
Thr Asp Gly Arg	Ser Tyr Asp Asp Val Arg	Ile Pro Ala Met Ala	

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675

Pro Arg Asn

<210> 180  
 <211> 1759  
 <212> DNA  
 <213> Homo sapiens

<400> 180  
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 gcgctgctgc ctcagcacca tgggtgcgcca ggtcccgacg gctccgcgcc 150  
 agatcccgcc cactacagtt tttctctgac totaattgat gcaactggaca 200  
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 ctgagaatgg ctgaggaggc ggcccgaata ctcctcccag cctttcagac 450  
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 caggagagac ccctgtcacc tgtacggcag ggattgggac cttcattgtt 550  
 gaatttgcca ccctgagcag cctcactggt gaccggtgt tccaagatgt 600  
 ggccagagtg gctttgatgc gcctctggga gagccggtca gatatcgggc 650  
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gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050  
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 ccttgcaactg ctgccagagg ctgaaggaag agcagtggga ggtggaggac 1450  
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 cagaaggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650  
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 atcataaaa 1759

<210> 181  
 <211> 541  
 <212> PRT  
 <213> Homo sapiens

<400> 181  
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 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu  
 35 40 45  
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val  
 50 55 60  
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn  
 65 70 75  
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu  
 80 85 90  
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala  
 95 100 105  
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala  
 110 115 120  
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

	125		130		135
Tyr Gly Thr Val	Asn Leu Leu His Gly Val	Asn Pro Gly Glu Thr			
	140	145			150
Pro Val Thr Cys	Thr Ala Gly Ile Gly Thr	Phe Ile Val Glu Phe			
	155	160			165
Ala Thr Leu Ser	Ser Leu Thr Gly Asp Pro	Val Phe Glu Asp Val			
	170	175			180
Ala Arg Val Ala	Leu Met Arg Leu Trp Glu	Ser Arg Ser Asp Ile			
	185	190			195
Gly Leu Val Gly	Asn His Ile Asp Val Leu	Thr Gly Lys Trp Val			
	200	205			210
Ala Gln Asp Ala	Gly Ile Gly Ala Gly Val	Asp Ser Tyr Phe Glu			
	215	220			225
Tyr Leu Val Lys	Gly Ala Ile Leu Leu Gln	Asp Lys Lys Leu Met			
	230	235			240
Ala Met Phe Leu	Glu Tyr Asn Lys Ala Ile	Arg Asn Tyr Thr Arg			
	245	250			255
Phe Asp Asp Trp	Tyr Leu Trp Val Gln Met	Tyr Lys Gly Thr Val			
	260	265			270
Ser Met Pro Val	Phe Gln Ser Leu Glu Ala	Tyr Trp Pro Gly Leu			
	275	280			285
Gln Ser Leu Ile	Gly Asp Ile Asp Asn Ala	Met Arg Thr Phe Leu			
	290	295			300
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe Gly	Gly Leu Pro Glu Phe			
	305	310			315
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val Glu	Lys Arg Glu Gly Tyr			
	320	325			330
Pro Leu Arg Pro	Glu Leu Ile Glu Ser Ala	Met Tyr Leu Tyr Arg			
	335	340			345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu Leu	Gly Arg Asp Ala Val			
	350	355			360
Glu Ser Ile Glu	Lys Ile Ser Lys Val Glu	Cys Gly Phe Ala Thr			
	365	370			375
Ile Lys Asp Leu	Arg Asp His Lys Leu Asp	Asn Arg Met Glu Ser			
	380	385			390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr Leu	Tyr Leu Leu Phe Asp			
	395	400			405
Pro Thr Asn Phe	Ile His Asn Asn Gly Ser	Thr Phe Asp Ala Val			
	410	415			420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu Gly	Ala Gly Gly Tyr Ile			
	425	430			435
Phe Asn Thr Glu	Ala His Pro Ile Asp Leu	Ala Ala Leu His Cys			

	440		445		450
Cys Gln Arg Leu	Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu	Met		
	455	460		465	
Arg Glu Phe Tyr	Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln	Lys		
	470	475		480	
Asn Thr Val Ser	Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro	Gly		
	485	490		495	
Thr Leu Phe Ser	Pro Glu Asn His Asp	Gln Ala Arg Glu Arg	Lys		
	500	505		510	
Pro Ala Lys Gln	Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln	Pro		
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Phe Thr Ser Lys	Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp	Ser		
	530	535		540	

Ser

<210> 182  
 <211> 2056  
 <212> DNA  
 <213> Homo sapiens

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 gcttcctggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150  
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
 gctttatttt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250  
 tgcagacttt cacaatggtt ctagaagaaa tctggacaag tcttttcatg 300  
 tggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350  
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 <212> PRT  
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<220>  
 <221> N-glycosylation sites  
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

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<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

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Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser  
35 40 45

Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro  
50 55 60

Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu  
65 70 75

Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser  
80 85 90

Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala  
95 100 105

Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln  
110 115 120

Thr Ser Ala Trp Ser Ile Leu Lys His Pro Phe Asn Arg Asn Ser  
125 130 135

Thr Ile Leu Thr Arg Pro Gly Met Glu Ile Thr Lys Asp Gly Phe  
140 145 150

His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe  
155 160 165

Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val  
170 175 180

Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr Met  
185 190 195

Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys  
200 205 210

Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu  
215 220 225



Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	230	235	240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	245	250	255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	260	265	270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	275	280	285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	290	295	300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					305	310	

<210> 184

<211> 808

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 654, 711, 748

<223> unknown base

<400> 184

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<210> 186  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 186  
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<210> 187  
<211> 50  
<212> DNA  
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<223> Synthetic oligonucleotide probe

<400> 187  
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188  
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<212> DNA  
<213> Homo sapiens

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ggcagcggcg tggctgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100  
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150  
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cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500  
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<210> 189  
 <211> 187  
 <212> PRT  
 <213> Homo sapiens

<400> 189

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Val	Asn	Ile	Arg	Gly	Lys	Leu	Val	Ser	Leu	Glu	Lys	Tyr	Arg	Gly	35	40	45	
Ser	Val	Ser	Leu	Val	Val	Asn	Val	Ala	Ser	Glu	Cys	Gly	Phe	Thr	50	55	60	
Asp	Gln	His	Tyr	Arg	Ala	Leu	Gln	Gln	Leu	Gln	Arg	Asp	Leu	Gly	65	70	75	
Pro	His	His	Phe	Asn	Val	Leu	Ala	Phe	Pro	Cys	Asn	Gln	Phe	Gly	80	85	90	
Gln	Gln	Glu	Pro	Asp	Ser	Asn	Lys	Glu	Ile	Glu	Ser	Phe	Ala	Arg	95	100	105	
Arg	Thr	Tyr	Ser	Val	Ser	Phe	Pro	Met	Phe	Ser	Lys	Ile	Ala	Val	110	115	120	
Thr	Gly	Thr	Gly	Ala	His	Pro	Ala	Phe	Lys	Tyr	Leu	Ala	Gln	Thr	125	130	135	
Ser	Gly	Lys	Glu	Pro	Thr	Trp	Asn	Phe	Trp	Lys	Tyr	Leu	Val	Ala	140	145	150	
Pro	Asp	Gly	Lys	Val	Val	Gly	Ala	Trp	Asp	Pro	Thr	Val	Ser	Val				

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 <223> Synthetic oligonucleotide probe

<400> 190  
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 <211> 24  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 191  
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<210> 192  
 <211> 50  
 <212> DNA  
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 <213> Homo sapiens

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<211> 615  
<212> PRT  
<213> Homo sapiens

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Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr  
50 55 60  
Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly  
65 70 75  
Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala  
80 85 90  
Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu  
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Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly  
110 115 120  
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Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile  
140 145 150  
Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr  
155 160 165  
Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln  
170 175 180  
Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro  
185 190 195  
Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu  
200 205 210  
Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly  
215 220 225  
Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln  
230 235 240  
His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

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Lys	Gly	Ala	Thr	Leu	Ser	His	Tyr	Asn	Ile	Val	Asn	Asn	Ser	Asn
				275					280					285
Ile	Leu	Gly	Glu	Arg	Leu	Lys	Leu	His	Glu	Lys	Thr	Pro	Glu	Gln
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Leu	Arg	Met	Ile	Leu	Pro	Asn	Pro	Leu	Tyr	His	Cys	Leu	Gly	Ser
				305					310					315
Val	Ala	Gly	Thr	Met	Met	Cys	Leu	Met	Tyr	Gly	Ala	Thr	Leu	Ile
				320					325					330
Leu	Ala	Ser	Pro	Ile	Phe	Asn	Gly	Lys	Lys	Ala	Leu	Glu	Ala	Ile
				335					340					345
Ser	Arg	Glu	Arg	Gly	Thr	Phe	Leu	Tyr	Gly	Thr	Pro	Thr	Met	Phe
				350					355					360
Val	Asp	Ile	Leu	Asn	Gln	Pro	Asp	Phe	Ser	Ser	Tyr	Asp	Ile	Ser
				365					370					375
Thr	Met	Cys	Gly	Gly	Val	Ile	Ala	Gly	Ser	Pro	Ala	Pro	Pro	Glu
				380					385					390
Leu	Ile	Arg	Ala	Ile	Ile	Asn	Lys	Ile	Asn	Met	Lys	Asp	Leu	Val
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Val	Ala	Tyr	Gly	Thr	Thr	Glu	Asn	Ser	Pro	Val	Thr	Phe	Ala	His
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Phe	Pro	Glu	Asp	Thr	Val	Glu	Gln	Lys	Ala	Glu	Ser	Val	Gly	Arg
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Ile	Met	Pro	His	Thr	Glu	Ala	Arg	Ile	Met	Asn	Met	Glu	Ala	Gly
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Thr	Leu	Ala	Lys	Leu	Asn	Thr	Pro	Gly	Glu	Leu	Cys	Ile	Arg	Gly
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Tyr	Cys	Val	Met	Leu	Gly	Tyr	Trp	Gly	Glu	Pro	Gln	Lys	Thr	Glu
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Glu	Ala	Val	Asp	Gln	Asp	Lys	Trp	Tyr	Trp	Thr	Gly	Asp	Val	Ala
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Thr	Met	Asn	Glu	Gln	Gly	Phe	Cys	Lys	Ile	Val	Gly	Arg	Ser	Lys
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Asp	Met	Ile	Ile	Arg	Gly	Gly	Glu	Asn	Ile	Tyr	Pro	Ala	Glu	Leu
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Glu	Asp	Phe	Phe	His	Thr	His	Pro	Lys	Val	Gln	Glu	Val	Gln	Val
				530					535					540
Val	Gly	Val	Lys	Asp	Asp	Arg	Met	Gly	Glu	Glu	Ile	Cys	Ala	Cys
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Ile	Arg	Leu	Lys	Asp	Gly	Glu	Glu	Thr	Thr	Val	Glu	Glu	Ile	Lys

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Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr	575		580		585
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Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu	605		610		615

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 <212> DNA  
 <213> Homo sapiens

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 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200  
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 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196  
 <211> 1575  
 <212> DNA  
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GenBank

ctgcaacgcc aagctcaacc tcacctogcg ggcgctcgac ccggcaggta 400  
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cctacttctc cctcgaatc ccaccccttg tccggctgcc ccctccagag 750  
cccacgactg tggcctcaac cacatctgtc accacttcta cctcggcccc 800  
agtgaagacc acatccacca ccaaaccat gccagcgcca accagtcaga 850  
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ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgtcta 1050  
ctgtgagctt ctccacctgg aaatttccct ctacactact tctctggccc 1100  
tgggtacccc tcttctcatc acttctgtt cccaccactg gactgggctg 1150  
gcccagcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200  
gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250  
gggtgttcta gctttttgag gacagctcct gtatccttct catccttgtc 1300  
tctccgcttg tcctcttgtg atgttaggac agagtgaagag aagtcagctg 1350  
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ctctaagcac tgctccctc actccccga tctttgggga atcggttccc 1500  
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<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

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Ala	Gly	Trp	Leu	Leu	Leu	Leu	Leu	Leu	Arg	Gly	Gly	Ala	Gln	Ala
			20						25				30	

Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

	35	40	45
Pro Asn Lys Met	Lys Thr Val Lys Cys Ala	Pro Gly Val Asp Val	
	50	55	60
Cys Thr Glu Ala	Val Gly Ala Val Glu Thr	Ile His Gly Gln Phe	
	65	70	75
Ser Leu Ala Val	Arg Gly Cys Gly Ser Gly	Leu Pro Gly Lys Asn	
	80	85	90
Asp Arg Gly Leu	Asp Leu His Gly Leu Leu	Ala Phe Ile Gln Leu	
	95	100	105
Gln Gln Cys Ala	Gln Asp Arg Cys Asn Ala	Lys Leu Asn Leu Thr	
	110	115	120
Ser Arg Ala Leu	Asp Pro Ala Gly Asn Glu	Ser Ala Tyr Pro Pro	
	125	130	135
Asn Gly Val Glu	Cys Tyr Ser Cys Val Gly	Leu Ser Arg Glu Ala	
	140	145	150
Cys Gln Gly Thr	Ser Pro Pro Val Val Ser	Cys Tyr Asn Ala Ser	
	155	160	165
Asp His Val Tyr	Lys Gly Cys Phe Asp Gly	Asn Val Thr Leu Thr	
	170	175	180
Ala Ala Asn Val	Thr Val Ser Leu Pro Val	Arg Gly Cys Val Gln	
	185	190	195
Asp Glu Phe Cys	Thr Arg Asp Gly Val Thr	Gly Pro Gly Phe Thr	
	200	205	210
Leu Ser Gly Ser	Cys Cys Gln Gly Ser Arg	Cys Asn Ser Asp Leu	
	215	220	225
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg Ile	Pro Pro Leu Val Arg	
	230	235	240
Leu Pro Pro Pro	Glu Pro Thr Thr Val Ala	Ser Thr Thr Ser Val	
	245	250	255
Thr Thr Ser Thr	Ser Ala Pro Val Arg Pro	Thr Ser Thr Thr Lys	
	260	265	270
Pro Met Pro Ala	Pro Thr Ser Gln Thr Pro	Arg Gln Gly Val Glu	
	275	280	285
His Glu Ala Ser	Arg Asp Glu Glu Pro Arg	Leu Thr Gly Gly Ala	
	290	295	300
Ala Gly His Gln	Asp Arg Ser Asn Ser Gly	Gln Tyr Pro Ala Lys	
	305	310	315
Gly Gly Pro Gln	Gln Pro His Asn Lys Gly	Cys Val Ala Pro Thr	
	320	325	330
Ala Gly Leu Ala	Ala Leu Leu Leu Ala Val	Ala Ala Gly Val Leu	
	335	340	345

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<210> 198  
 <211> 1657  
 <212> DNA  
 <213> Homo sapiens

<400> 198  
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 gtccctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150  
 tgattaccag accctgagga ttgggggact ggtgttcgct gtggctcctct 200  
 tctcgggttg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250  
 aatcagaagc cccggggccc aggagatgag gaagcccagg tggagaacct 300  
 catcacccgc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350  
 catcaggtgg aagcctctgg aacctgaggc ggctgcttga acctttggat 400  
 gcaaattgtc atgcttaaga aaaccggcca cttcagcaac agccctttcc 450  
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500  
 cattcctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550  
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 acgtcaggca ggctatgcc ttccgtggtt aatttcttcc caggggcttc 1050  
 cacgaggagt ccccatctgc cccgcccctt cacagagcgc ccggggatto 1100  
 caggcccagg gcttctactc tgcccctggg gaatgtgtcc cctgcatatc 1150  
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 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250  
 cagtccctgc aattgggtct ctggcaggca atagttgaag gactcctgtt 1300  
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350  
 cttctctgcc tacgtcccct tagatgggca gcagaggcaa ctcccgcata 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcgaggt gggttggaga 1450  
ctcagcaggc tccgtgcagc ccttgggaac agtgagaggt tgaaggcat 1500  
aacgagagtg ggaactcaac ccagatcccg cccctcctgt cctctgtgtt 1550  
cccgcggaaa ccaaccaaac cgtgcgctgt gaccattgc tgttctctgt 1600  
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gtttcct 1657

<210> 199  
<211> 120  
<212> PRT  
<213> Homo sapiens

<400> 199  
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Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe  
20 25 30  
His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala  
35 40 45  
Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg  
50 55 60  
Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu  
65 70 75  
Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro  
80 85 90  
Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp  
95 100 105  
Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala  
110 115 120

<210> 200  
<211> 415  
<212> DNA  
<213> Homo sapiens

<400> 200  
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aagaaagcac cattgagaat tatgcgtcac gacccgaggc ctttaacacc 150  
ccgttcctga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200  
cctgaactgg cagccctct ttgagtctat caaaaggaaa cttcctttcc 250  
tcaactggga tgcctttcct aagctgaaag gactgaggag cgcaactcct 300  
gatgccagtg gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350  
tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

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Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
 1              5              10              15
Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu
              20              25              30
Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
              35              40              45
Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
              50              55              60
Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
              65              70              75
Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
              80              85              90
Leu Arg Ser Ala Thr Pro Asp Ala Gln
              95
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<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

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gggtggagatt gcctttgcct cagtgattct cacctgcctc tcccttctgg 100
cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150
acagggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200
atgagagtgt ttttgtgtaa agtatttttt agaatactgt tgacttcttc 250
atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300
tcaacctca aatttttggt atactagatg gcttccattt acccaccact 350
attttaaggt ccctttatct ttaggttcaa ggttcatttg acttgagaaa 400
gtgcccttct gcagcttcat tgattttggt tatcttcaact attaattgta 450
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500
cctgggtgcc cctgacacat ttatgtagtg atcccacaaa tgtgattggt 550
aatttaaagt ttattctaatt attagtagat tcagttgtga tgtaatatga 600
ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650
atttgtatag aaagactgaa tagtgatg 678
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<210> 203  
 <211> 52  
 <212> PRT  
 <213> Homo sapiens

<400> 203  
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           1                          5                          10                          15  
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro  
                           20                          25                          30  
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser  
                           35                          40                          45  
 Cys Gly Phe Ala Gly His Ser  
                           50

<210> 204  
 <211> 1917  
 <212> DNA  
 <213> Homo sapiens

<400> 204  
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 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150  
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200  
 tgggtgtcata gaagaggatc taactccttt ccgaggaggc atctccagga 250  
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 tggagatggt gatcaatgta cgagattatc ctcagggttc taaatggatg 450  
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 tatcatgtat cctgcttggc cattttggga agggggacct gctgtttggc 550  
 caatttatcc tacagggtct ggacgggtggg acctcttcag agaagatctg 600  
 gtaagggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650  
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 tggaaatcta tgaaagatac cttaggaaaag ccagctgcta aggatgtcca 800  
 tcttgtggat cactgcaaat acaagtatct gtttaatttt cgaggcgtag 850  
 ctgcaagttt ccggttttaa cacctcttcc tgtgtggctc acttgttttc 900  
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 ggttcactat atcccagtc aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050  
ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100  
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cgagaaggaa aggttatgat caaattattc ccaaaatggt gaaaactgaa 1200  
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gatatcctac ggtgagaagc ttaccataag cttggctcct ataccttgaa 1300  
tatctgctat caagccaaat acctggtttt ccttatcatg ctgcacccag 1350  
agcaactctt gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400  
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tgtgatgatg ccctttgtcc cattatttgg agcagaaaat tcgtcatttg 1600  
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aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800  
ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850  
caattggatt tcaggttccc tttttgtgcc ttcatgccct acttcttaat 1900  
gcctctctaa agccaaa 1917

<210> 205

<211> 392

<212> PRT

<213> Homo sapiens

<400> 205

Met	Glu	Trp	Trp	Ala	Ser	Ser	Pro	Leu	Arg	Leu	Trp	Leu	Leu	Leu
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Phe	Leu	Leu	Pro	Ser	Ala	Gln	Gly	Arg	Gln	Lys	Glu	Ser	Gly	Ser
				20					25					30
Lys	Trp	Lys	Val	Phe	Ile	Asp	Gln	Ile	Asn	Arg	Ser	Leu	Glu	Asn
				35					40					45
Tyr	Glu	Pro	Cys	Ser	Ser	Gln	Asn	Cys	Ser	Cys	Tyr	His	Gly	Val
				50					55					60
Ile	Glu	Glu	Asp	Leu	Thr	Pro	Phe	Arg	Gly	Gly	Ile	Ser	Arg	Lys
				65					70					75
Met	Met	Ala	Glu	Val	Val	Arg	Arg	Lys	Leu	Gly	Thr	His	Tyr	Gln
				80					85					90
Ile	Thr	Lys	Asn	Arg	Leu	Tyr	Arg	Glu	Asn	Asp	Cys	Met	Phe	Pro

	95	100	105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly
	110	115	120
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr	Pro
	125	130	135
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe
	140	145	150
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp	Thr
	155	160	165
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly
	170	175	180
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala
	185	190	195
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg
	200	205	210
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser
	215	220	225
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn	Gln
	230	235	240
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys
	245	250	255
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn
	260	265	270
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu
	275	280	285
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe
	290	295	300
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys
	305	310	315
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala
	320	325	330
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe
	335	340	345
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu
	350	355	360
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr
	365	370	375
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr
	380	385	390
Glu Leu			

<210> 206



<211> 1425  
<212> DNA  
<213> Homo sapiens

<400> 206

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tttacctccc ttcgccact tcttgaggagg atcccgaggt ctggtggtcc 150  
ggatgcccg cagggatggc tggctgccct gcaggaccgc agcatccttg 200  
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ctgggctcag accccaacct agtcaagggg attctcctgc tcttaactcg 1350  
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aaagtcagcc tttttctaaa aaaaa 1425

<210> 207  
 <211> 262  
 <212> PRT  
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe
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Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Leu	Phe	Val	Gly
				65					70					75
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
				80					85					90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
				95					100					105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
				110					115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
				125					130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
				140					145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
				155					160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
				170					175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
				185					190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
				200					205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
				215					220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
				230					235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
				245					250					255
Pro	Gln	Asp	Gly	Glu	Ala	Glu								
				260										

<210> 208  
 <211> 2095  
 <212> DNA

<213> Homo sapiens

<400> 208

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gtagttcaca acagatctga gtgttttaat taagcatgga atacagaaaa 150  
caacaaaaaa ctttaagcttt aatttcatct ggaattccac agttttctta 200  
gctccctgga cccggttgac ctgttggctc ttcccgtgg ctgctctatc 250  
acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggtctg 300  
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350  
gagtaggatg tcaactgagat ccctcaaag gagcctcctg ctgctgtcac 400  
tcctgagttt ctttgtgatg tggtaacctca gccttcccca ctacaatgtg 450  
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500  
acaagacttt cacttcacac ttcgagagca ttcaaactgc tctcatcaaa 550  
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600  
aggcaggcca ttagagttac ttggggtgaa aaaaagtctt ggtggggata 650  
tgagggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700  
aaatgttggc attgtcctta gaggatgaac accttcttta tgggtgacata 750  
atccgacaag atttttttaga cacatataat aacctgacct tgaaaaccat 800  
tatggcattc aggtgggtaa ctgagttttg cccaatgcc aagtacgtaa 850  
tgaagacaga cactgatgtt ttcacataa ctggcaattt agtgaagtat 900  
cttttaaacc taaaccactc agagaagttt ttcacagggt atcctctaata 950  
tgataattat tcctatagag gattttacca aaaaacccat atttcttacc 1000  
aggagtatcc tttcaagggt ttccctccat actgcagtgg gttgggttat 1050  
ataatgtcca gagatttggg gccaaagatc tatgaaatga tgggtcacgt 1100  
aaaacccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150  
taaaagtga cttcatatt ccagaagaca caaatctttt ctttctatat 1200  
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250  
cttttcttcc aaggagatca tcaatttttg gcaggatcat ctaaggaaca 1300  
ccacatgcca ttattaactt cacattctac aaaaagccta gaaggacagg 1350  
ataccttgtg gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400  
ggaggtcagt gtgctggctt acactgaact gaaactcatg aaaaaccag 1450  
actggagact ggagggttac acttgtgatt tattagtcag gcccttcaaa 1500

gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550  
 gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600  
 ttcttaaaag ggtgttactg agttataagc tcaactaggct gtaaaaacaa 1650  
 aacaatgtag agttttatattt attgaacaat gtagtcactt gaaggttttg 1700  
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 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900  
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950  
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000  
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaataattt 2050  
 tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209  
 <211> 331  
 <212> PRT  
 <213> Homo sapiens

<400> 209  
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 Arg Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Leu Ser Phe  
 20 25 30  
 Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu  
 35 40 45  
 Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg  
 50 55 60  
 Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His  
 65 70 75  
 Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp  
 80 85 90  
 Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys  
 95 100 105  
 Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln  
 110 115 120  
 Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp  
 125 130 135  
 Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp  
 140 145 150  
 Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile Met Ala Phe Arg Trp  
 155 160 165

Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp
				170					175					180
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu
				185					190					195
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile
				200					205					210
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser
				215					220					225
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly
				230					235					240
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu
				245					250					255
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val
				260					265					270
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu
				275					280					285
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys
				290					295					300
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu
				305					310					315
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His
				320					325					330

Tyr

<210> 210  
 <211> 745  
 <212> DNA  
 <213> Homo sapiens

<400> 210  
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 gctggacttc ttggagtctt tctagctcct gccctagcta actataatat 100  
 caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150  
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200  
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250  
 actctttcaa aagaagacat gcattgtgca caaaatgaac aaggaagtca 300  
 tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350  
 ggtaaggggac caggaggacc acctcccaag ggctgatgt actcagtcaa 400  
 cccaaacaaa gtcgatgacc tgagcaagtt cggaaaaaac attgcaaaca 450  
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500  
 ctgttttttt actcaggaac gtgctacacg accagtgtac tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600  
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650  
tccagtgggtt tttaccatgt cattctgaaa tttttctcta ctagttatgt 700  
ttgatttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211  
<211> 185  
<212> PRT  
<213> Homo sapiens

<400> 211  
Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu  
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Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn  
20 25 30  
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu  
35 40 45  
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp  
50 55 60  
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu  
65 70 75  
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val  
80 85 90  
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys  
95 100 105  
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Pro Lys Gly Leu Met  
110 115 120  
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly  
125 130 135  
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala  
140 145 150  
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys  
155 160 165  
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly  
170 175 180  
Asp Thr Val Glu Asn  
185

<210> 212  
<211> 1706  
<212> DNA  
<213> Homo sapiens

<400> 212  
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atgaaataat ttaaaagggc ttcgctcata tataggaaaa tcgcatatgg 150  
 tcctagtatt aaattcttat tgcttactga tttttttgag ttaagagttg 200  
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250  
 ataaagtaga ttgagtctcc aattttatgt aagcttcaga agaactgggt 300  
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350  
 gacagtcttc gaaccaatgt gtttggtcga tttcaaccag agactatagc 400  
 atgtgcttgc atctaccttg cagctagagc acttcagatt ccgttgccaa 450  
 ctcgccccca ttggtttctt ctttttggtg ctacagaaga ggaaatccag 500  
 gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550  
 tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc ttacaagaag 600  
 ccaaattaaa agcaaagggg ttgaatccgg atggaactcc agccctttca 650  
 accctgggtg gattttctcc agcctccaag ccatcatcac caagagaagt 700  
 aaaagctgaa gagaaatcac caatctccat taatgtgaag acagtcaaaa 750  
 aagaacctga ggatagacaa caggcttcca aaagccctta caatggtgta 800  
 agaaaagaca gcaagagaag tagaaatagc agaagtgcaa gtogatcgag 850  
 gtcaagaaca cgatcacgtt ctagatcaca tactccaaga agacactata 900  
 ataataggcg gagtcgatct ggaacataca gctcgagatc aagaagcagg 950  
 tcccgcagtc acagtgaag cctcgaaga catcataatc atggttctcc 1000  
 tcaccttaag gccaagcata ccagagatga tttaaaaagt tcaaacagac 1050  
 atggtcataa aaggaaaaaa tctcgttctc gatctcagag caagtctcgg 1100  
 gatcactcag atgcagccaa gaaacacagg catgaaaggg gacatcatag 1150  
 ggacaggcgt gaacgatctc gtccttttga gaggtcccat aaaagcaagc 1200  
 accatggtgg cagtcgctca ggacatggca ggcacaggcg ctgactttct 1250  
 cttcctttga gcctgcatca gttcttggtt ttgcctatct acagtgtgat 1300  
 gtatggactc aatcaaaaac attaaacgca aactgattag gatttgattt 1350  
 cttgaaaccc tctaggtctc tagaactctg aggacagttt cttttgaaaa 1400  
 gaactatggt aatttttttg cacattaaaa tgccctagca gtatctaatt 1450  
 aaaaaccatg gtcagggtca attgtacttt attatagttg tgtattgttt 1500  
 attgctataa gaactggagc gtgaattctg taaaaatgta tottattttt 1550  
 atacagataa aattgcagac actgttctat ttaagtgggt atttgtttaa 1600  
 atgatggtga atactttctt aacactgggt tgtctgcatg tgtaaagatt 1650  
 tttacaagga aataaaatac aaatcttggt ttttctaaaa aaaaaaaaaa 1700

aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro
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Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys



His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg  
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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gcattgcttt ttacagaaat atattanctt tttagagtaa tttctagttt 150  
ggattgtaat atgaaattat ttaaaagggc ttogctcata tataggaaaa 200  
tcgcatatgg tcctagtatt aaattnttat tgcttactga tttttttgag 250  
ttaagagttg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300  
agaaaaaaga ataaagtaga ttgagtctcc aattttatgt aagcttcaga 350  
agaactgggtt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400  
ttacatgaat gacagtcttc gaaccaatgt gtttgttoga tttcaaccag 450  
agantatagc atgtgcttgc atctacctg cagntagagc acttcagatt 500  
ccgttgccaa ctngtcccca ttggtttctt ctttttggtg ctacagaaga 550  
ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600  
agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650  
ttacaagaag ccnaattaaa agcaaaggga ttgaatccgg atggaactcc 700  
agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

ggcacgaggc ctctgtgcaa gcttggcacg aggggtgcacc gcgtttctgc 50  
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ccacctcat gcacaggctg gcgccacact gctccttcgc gcgctggctg 150  
ctctgtaacg gcagtttgtt ccgatacaag caccogtctg aggaggagct 200  
tcggggccctg gcggggaagc cgaggccag aggcaggaaa gagcgggtggg 250  
ccaatggcct tagtgaggag aagccactgt ctgtgccccg agatgccccg 300

ttccagctgg agacctgccc cctcacgacc gtggatgccc tggtoctgcg 350  
 cttcttcctg gaggaccagt ggttttgtgga ctttgctgtg tactcgggcg 400  
 gcgtgtacct cttcacagag gcctactact acatgctggg accagccaag 450  
 gagactaaca ttgctgtgtt ctgggtgcctg ctcacgggtga ccttctccat 500  
 caagatgttc ctgacagtga cacggctgta cttcagcgcc gaggaggggg 550  
 gtgagcgctc tgtctgcctc acctttgcct tcctcttctt gctgctggcc 600  
 atgctggtgc aagtgggtgc ggaggagacc ctogagctgg gcctggagcc 650  
 tgggtctggcc agcatgaccc agaacttaga gccacttctg aagaagcagg 700  
 gctgggactg ggcgcttcct gtggccaagc tggctatccg cgtgggactg 750  
 gcagtgggtg gctctgtgct gggtgccttc ctcaccttc caggcctgcg 800  
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 tgctgcagtt cctcctgcac accagcttc tgtctccct gttcatctg 900  
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 tggggagacg cgtttctccc tgctgtccga ttctgccttc gactctgggc 1000  
 gcctctggtt gctgggtgtg ctgtgcctgc tgcggctggc ggtgaccogg 1050  
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 tccgagtcta ctgctatgtg accgtggtga gcttgcagta cctgaogcog 1200  
 ctcctcctca ccctcaactg cacacttctg ctcaagacgc tgggaggcta 1250  
 ttctggggc ctgggcccag ctctctact atccccgac ccctcctcag 1300  
 ccagcgctgc ccccatcggc tctggggagg acgaagtcca gcagactgca 1350  
 gcgcggattg ccggggccct gggtggcctg cttactcccc tottctccg 1400  
 tggcgtctg gcctacctca tctggtggac ggctgcctgc cagctgctog 1450  
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 cctgcagacc ctctggggc cctgaggtct gttctgggg cagcgggaca 1550  
 ctagcctgcc ccctctgttt gcgccccgt gtccccagct gcaaggtggg 1600  
 gccggactcc ccggcgttcc cttcaccaca gtgcctgacc cgcggcccc 1650  
 cttggacgcc gagtttctgc ctcagaactg tctctcctgg gccagcagc 1700  
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 ggcgaggggtg atgctggctg ctcttctgaa caaataaagg agcatgccga 1800  
 tttttaa 1807

<210> 216

<211> 479  
 <212> PRT  
 <213> Homo sapiens

<400> 216

Met	Ala	Val	Leu	Gly	Val	Gln	Leu	Val	Val	Thr	Leu	Leu	Thr	Ala	1	5	10	15
Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp	20	25	30	
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu	35	40	45	
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg	50	55	60	
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser	65	70	75	
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr	80	85	90	
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp	95	100	105	
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr	110	115	120	
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile	125	130	135	
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met	140	145	150	
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly	155	160	165	
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu	170	175	180	
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly	185	190	195	
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu	200	205	210	
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu	215	220	225	
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala	230	235	240	
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp	245	250	255	
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu	260	265	270	
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr	275	280	285	
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu				

	290	295	300
Thr Arg Phe Ser	Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly	Arg
	305	310	315
Leu Trp Leu Leu	Val Val Leu Cys Leu	Leu Arg Leu Ala Val	Thr
	320	325	330
Arg Pro His Leu	Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg	Val
	335	340	345
Glu Gln Leu Arg	Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu	Ile
	350	355	360
Gln Gln Arg Val	Val Arg Val Tyr Cys	Tyr Val Thr Val Val	Ser
	365	370	375
Leu Gln Tyr Leu	Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr	Leu
	380	385	390
Leu Leu Lys Thr	Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro	Ala
	395	400	405
Pro Leu Leu Ser	Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro	Ile
	410	415	420
Gly Ser Gly Glu	Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile	Ala
	425	430	435
Gly Ala Leu Gly	Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly	Val
	440	445	450
Leu Ala Tyr Leu	Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu	Ala
	455	460	465
Ser Leu Phe Gly	Leu Tyr Phe His Gln	His Leu Ala Gly Ser	
	470	475	

<210> 217  
 <211> 574  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 5, 146  
 <223> unknown base

<400> 217  
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 gctggctgct ctgtaacggc agtttgttcc gatacaagca cccgtnttga 150  
 ggaggagctt cggggccttg cggggaagcc gagggcccaga ggcaggaaag 200  
 agcgggtgggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250  
 gatgccccgt tccagctgga gacctgcccc ctcacgaccg tggatgcocct 300  
 ggtcctgcgc ttcttcctgg agtaccagtg gtttgtggac tttgctgtgt 350

actcggggcgg cgtgtacctc ttcacagagg cctaactacta catgctggga 400  
ccagccaagg agactaacat tgctgtgttc tgggtgcctgc tcacagtgc 450  
cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500  
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<210> 218

<211> 2571

<212> DNA

<213> Homo sapiens

<400> 218

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ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150  
ggctgggttg ggcccttgta gctgacagaa ggtgggcagg gagaatgcag 200  
cacactgctc ggagaatgaa ggcgcttctg ttgctggtct tgccttggct 250  
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aggcgctcac aagatggctg tcacagcggc tgtgcgagcc tcacagccac 400  
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agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250  
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 cgtcgtgtcc cgccaggttc ggcagcggag ccttgacatc tttcaggaag 1350  
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 gagcatcaca tagagaatgg gatttgcta tctatgtcat cagtgttgag 1550  
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 gcactttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150  
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 tgaaagccag ttacacctca gaaaatatga ttccaaaaaa attaaaacta 2300  
 ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350  
 atattttttt tattcaataa aaagccctaa aacaactaaa atgattgatt 2400  
 tgtatacccc actgaattca agctgattta aatttaaaat ttggtatatg 2450  
 ctgaagtctg ccaagggtag attatggcca tttttaattt acagctaaaa 2500  
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<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

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Asn Tyr Ile Asp	Asn Val Gly Asn Leu His	Phe Leu Tyr Ser	Glu
	20	25	30
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg	Lys
	35	40	45
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu	Thr
	50	55	60
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Ala Thr Ile	Ser
	65	70	75
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val	Ser
	80	85	90
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser	Gly
	95	100	105
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr	Ile
	110	115	120
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val	Leu
	125	130	135
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp	Gln
	140	145	150
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe	Pro
	155	160	165
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile	Lys
	170	175	180
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu	Val
	185	190	195
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His	Ile
	200	205	210
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro	Gly
	215	220	225
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val	Pro
	230	235	240
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val	Leu
	245	250	255
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn	Asn
	260	265	270
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe	His
	275	280	285
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile	Lys
	290	295	300
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn	Val
	305	310	315
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu	Asn

[illegible]



<210> 220  
 <211> 773  
 <212> DNA  
 <213> Homo sapiens

<400> 220  
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 aggatagaag ctgcacaggg cagctttact tactccagca ccttcctctc 100  
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150  
 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttcaggagac 200  
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250  
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300  
 tccagggtgc tctcccgaag agcctgcttt atcctgaaga tggaccatca 350  
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400  
 ctctggacaa catgttctcc aacaaatata cctgggtcaa gtacaaccct 450  
 ctggagtctc tgatcaaaga cgtggattgg ttctgtcttg ggtcaccat 500  
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550  
 acacacataa tgtcgggtgct ggaggctgtg caaaggctgg gctcctgggc 600  
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650  
 ctcttgtttt atcttttcaa agaaatacat ccttgggtta cactcaaaag 700  
 tcaaattaaa ttctttccca atgccccaac taattttgag attcagtcag 750  
 aaaatataaa tgctgtattt ata 773

<210> 221  
 <211> 184  
 <212> PRT  
 <213> Homo sapiens

<400> 221  
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly  
 1 5 10 15  
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser  
 20 25 30  
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu  
 35 40 45  
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser  
 50 55 60  
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val  
 65 70 75  
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn  
 80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
				95					100					105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
				110					115					120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
				125					130					135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
				140					145					150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
				155					160					165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
				170					175					180

Asp Ile His Val

<210> 222  
 <211> 992  
 <212> DNA  
 <213> Homo sapiens

<400> 222  
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 tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150  
 ccattgccta caaagtcctg gaagttttcc ccaaaggccg ctgggtgctc 200  
 ataacctgct gtgcacccca gccaccaccg cccatcacct attccctctg 250  
 tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccaccagc 300  
 cggcctcctt caacctcaac gtcacactca agtccagtcc agacctgctc 350  
 acctacttct gccgggctgc ctccacctca ggtgcccattg tggacagtgc 400  
 caggctacag atgcactggg agctgtggtc caagccagtg tctgagctgc 450  
 gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500  
 atctgccagg cgtcctcggg cagcccacct atcaccaaca gcctgatcgg 550  
 gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600  
 ccaacttctc cttcctgccc agccagacat cggactgggt ctggtgccag 650  
 gctgcaaaca acgccaatgt ccagcacagc gccctcacag tggtgcccc 700  
 aggtggtgac cagaagatgg aggactggca ggggtccctg gagagcccca 750  
 tccttgccct gccgctctac aggagcacc gccgtctgag tgaagaggag 800  
 ttgggggggt tcaggatagg gaatggggag gtcagaggac gcaaagcagc 850  
 agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttggg gttcatgcaa aatgagtgtg 950

tttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser  
1 5 10 15

Ser Phe Ser Lys Ala Arg Glu Glu Glu Ile Thr Pro Val Val Ser  
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val  
35 40 45

Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Pro Ile Thr Tyr  
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val  
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys  
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr  
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu  
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu  
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala  
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp  
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala  
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys  
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val  
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro  
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg  
230 235 240

Arg Leu Ser Glu Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly  
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met  
260 265

<210> 224  
<211> 1297  
<212> DNA  
<213> Homo sapiens

<400> 224

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ctctctttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150  
ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttcaactat 200  
gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250  
aaatgtcaca acggcctgga aagcacagaa ccagtgactg agagagggtgg 300  
tgacatact tacagagcaa ctgctgaca ttcagctgga gaattacaca 350  
cccaaggaac ccctcacct gcaggcaagg atgtcttggt agcagaaagc 400  
tgaaggacac agcagtggat cttggcagtt cagtttcgat gggcagatct 450  
tcctcctctt tgactcagag aagagaatgt ggacaacggt tcatcctgga 500  
gccagaaaga tgaaagaaaa gtgggagaat gacaagggtg tggccatgtc 550  
cttccattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600  
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ttgctgcctc ctcatcatcc tcccctgctt catcctccct ggcatctgag 750  
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ccaatagctc attcactgcc ttgattcctt ttgccaacaa ttttaccagc 950  
agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000  
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tcttgcaaat gatattgtca gtaaaataat cacgttagac ttcagacctc 1150  
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tgatatTTAA ataaagagtt ctatttccca aaaaaaaaaa aaaaaaa 1297

<210> 225  
<211> 246  
<212> PRT  
<213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu  
1 5 10 15  
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro  
20 25 30  
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro  
35 40 45  
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr  
50 55 60  
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser  
65 70 75  
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln  
80 85 90  
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu  
95 100 105  
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr  
110 115 120  
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser  
125 130 135  
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu  
140 145 150  
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala  
155 160 165  
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met  
170 175 180  
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu  
185 190 195  
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly  
200 205 210  
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr  
215 220 225  
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys  
230 235 240  
Phe Ile Leu Pro Gly Ile  
245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

ggttttaatt ttggtggtag ccctcaccca attctggtgt ggctttcttt 200  
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250  
 gaatttggat tctactctaa aagtcaatat aggacttggc aaaagaagct 300  
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350  
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 attccaaaaa gaaaactcaa attgggaggg caaccacag aacagcattt 450  
 ctgggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500  
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctccc 550  
 ttacctttcc tctctccatt caagcattca aagtatatatt tcaatgaatt 600  
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650  
 accaatgaga gaaaaaatg catttctgt atcatccttt tcaataaact 700  
 gtattcattt tgaaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 227  
 Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu  
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 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly  
 20 25 30  
 Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu  
 35 40 45  
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys  
 50 55 60  
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr  
 65 70 75  
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu  
 80 85 90  
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln  
 95 100 105  
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu  
 110 115

<210> 228  
 <211> 2185  
 <212> DNA  
 <213> Homo sapiens

<400> 228  
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 cacaccatga agctcttgtg gcaggtaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccgttcg tctacctcac ggcgcaagtg tggattctgt 150  
 gtgcagccat cgctgctgcc gcctcagccg ggccccagaa ctgcccctcc 200  
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgcggggg 250  
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 caccacctgg aggtcctgca gttgggcagg aactccatcc ggcagattga 400  
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 cgcccttaac cgggtgccct ccctcatgog cctggacttg ggggagctca 600  
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 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700  
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 cccatgacct ctttaccocg ctgaggtacc tgggtggagtt gcatctacac 950  
 cacaaccctt ggaactgtga ttgtgacatt ctgtggctag cctgggtggct 1000  
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 cagtgcctcg ccccttcac catggacgca cctcgagacc tcaacatttc 1150  
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 tgaagtgggt gctgcccaat gggacagtgc tcagccacgc ctcccgccac 1250  
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 gttaccagcc ggcatatacc acctctacca cggtgctcat tcagactacc 1550  
 cgtgtgcccc agcagggtgg agtaccocg acagacacca ctgacaagat 1600  
 gcagaccagc ctggatgaag tcatgaagac caccaagatc atcattggct 1650  
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aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750  
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 cagcaacagc agctccgtcc ggtgtatcag gtgagggggc agtagtgctg 1850  
 cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900  
 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950  
 ccactatctc tgaaccttat ataattcaga ccataccaa ggacaaggta 2000  
 caggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050  
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100  
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 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Met	Lys	Leu	Leu	Trp	Gln	Val	Thr	Val	His	His	His	Thr	Trp	Asn	1	5	10	15
Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile	20	25	30	
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn	35	40	45	
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val	50	55	60	
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser	65	70	75	
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile	80	85	90	
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	His	Leu	Glu	Val	Leu	Gln	95	100	105	
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn	110	115	120	
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Trp	Leu	125	130	135	
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg	140	145	150	
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr	155	160	165	
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu	170	175	180	
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu				



185					190					195				
Phe	Asn	Leu	Lys	Tyr	Leu	Asn	Leu	Gly	Met	Cys	Asn	Ile	Lys	Asp
				200					205					210
Met	Pro	Asn	Leu	Thr	Pro	Leu	Val	Gly	Leu	Glu	Glu	Leu	Glu	Met
				215					220					225
Ser	Gly	Asn	His	Phe	Pro	Glu	Ile	Arg	Pro	Gly	Ser	Phe	His	Gly
				230					235					240
Leu	Ser	Ser	Leu	Lys	Lys	Leu	Trp	Val	Met	Asn	Ser	Gln	Val	Ser
				245					250					255
Leu	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Gly	Leu	Ala	Ser	Leu	Val	Glu
				260					265					270
Leu	Asn	Leu	Ala	His	Asn	Asn	Leu	Ser	Ser	Leu	Pro	His	Asp	Leu
				275					280					285
Phe	Thr	Pro	Leu	Arg	Tyr	Leu	Val	Glu	Leu	His	Leu	His	His	Asn
				290					295					300
Pro	Trp	Asn	Cys	Asp	Cys	Asp	Ile	Leu	Trp	Leu	Ala	Trp	Trp	Leu
				305					310					315
Arg	Glu	Tyr	Ile	Pro	Thr	Asn	Ser	Thr	Cys	Cys	Gly	Arg	Cys	His
				320					325					330
Ala	Pro	Met	His	Met	Arg	Gly	Arg	Tyr	Leu	Val	Glu	Val	Asp	Gln
				335					340					345
Ala	Ser	Phe	Gln	Cys	Ser	Ala	Pro	Phe	Ile	Met	Asp	Ala	Pro	Arg
				350					355					360
Asp	Leu	Asn	Ile	Ser	Glu	Gly	Arg	Met	Ala	Glu	Leu	Lys	Cys	Arg
				365					370					375
Thr	Pro	Pro	Met	Ser	Ser	Val	Lys	Trp	Leu	Leu	Pro	Asn	Gly	Thr
				380					385					390
Val	Leu	Ser	His	Ala	Ser	Arg	His	Pro	Arg	Ile	Ser	Val	Leu	Asn
				395					400					405
Asp	Gly	Thr	Leu	Asn	Phe	Ser	His	Val	Leu	Leu	Ser	Asp	Thr	Gly
				410					415					420
Val	Tyr	Thr	Cys	Met	Val	Thr	Asn	Val	Ala	Gly	Asn	Ser	Asn	Ala
				425					430					435
Ser	Ala	Tyr	Leu	Asn	Val	Ser	Thr	Ala	Glu	Leu	Asn	Thr	Ser	Asn
				440					445					450
Tyr	Ser	Phe	Phe	Thr	Thr	Val	Thr	Val	Glu	Thr	Thr	Glu	Ile	Ser
				455					460					465
Pro	Glu	Asp	Thr	Thr	Arg	Lys	Tyr	Lys	Pro	Val	Pro	Thr	Thr	Ser
				470					475					480
Thr	Gly	Tyr	Gln	Pro	Ala	Tyr	Thr	Thr	Ser	Thr	Thr	Val	Leu	Ile
				485					490					495
Gln	Thr	Thr	Arg	Val	Pro	Lys	Gln	Val	Ala	Val	Pro	Ala	Thr	Asp

500					505					510				
Thr	Thr	Asp	Lys	Met	Gln	Thr	Ser	Leu	Asp	Glu	Val	Met	Lys	Thr
				515					520					525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Val	Thr	Leu	Leu	Ala
				530					535					540
Ala	Ala	Met	Leu	Ile	Val	Phe	Tyr	Lys	Leu	Arg	Lys	Arg	His	Gln
				545					550					555
Gln	Arg	Ser	Thr	Val	Thr	Ala	Ala	Arg	Thr	Val	Glu	Ile	Ile	Gln
				560					565					570
Val	Asp	Glu	Asp	Ile	Pro	Ala	Ala	Thr	Ser	Ala	Ala	Ala	Thr	Ala
				575					580					585
Ala	Pro	Ser	Gly	Val	Ser	Gly	Glu	Gly	Ala	Val	Val	Leu	Pro	Thr
				590					595					600
Ile	His	Asp	His	Ile	Asn	Tyr	Asn	Thr	Tyr	Lys	Pro	Ala	His	Gly
				605					610					615
Ala	His	Trp	Thr	Glu	Asn	Ser	Leu	Gly	Asn	Ser	Leu	His	Pro	Thr
				620					625					630
Val	Thr	Thr	Ile	Ser	Glu	Pro	Tyr	Ile	Ile	Gln	Thr	His	Thr	Lys
				635					640					645
Asp	Lys	Val	Gln	Glu	Thr	Gln	Ile							
				650										

<210> 230  
 <211> 2846  
 <212> DNA  
 <213> Homo sapiens

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 tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150  
 tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200  
 gggaagtcgt gggttatacc atcccttgct gcaggaatga ggagaatgag 250  
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 aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400  
 atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450  
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gcataggatc ctcaactccac gtctctctcc actccgatgg ctccaagaat 700  
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aaaagaactt gccagcagaa tggagagtgg tcagggaac agcccatctg 1050  
cataaaagcc tgccgagaac caaagatttc agacctgggtg agaaggagag 1100  
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gagctgggat gtggtgcatg cctttgtgta catggccaca gtacagtctg 2650  
gtccttttcc ttccccatct cttgtacaca ttttaataaa ataagggttg 2700  
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aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231  
<211> 720  
<212> PRT  
<213> Homo sapiens

<400> 231  
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Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys  
35 40 45  
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu  
50 55 60  
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu  
65 70 75  
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn  
80 85 90  
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp  
95 100 105  
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp  
110 115 120  
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro  
125 130 135  
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys  
140 145 150  
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg  
155 160 165

Phe	Val	Met	Leu	Ser	Leu	Glu	Phe	Asp	Tyr	Met	Cys	Gln	Tyr	Asp	170	175	180
Tyr	Val	Glu	Val	Arg	Asp	Gly	Asp	Asn	Arg	Asp	Gly	Gln	Ile	Ile	185	190	195
Lys	Arg	Val	Cys	Gly	Asn	Glu	Arg	Pro	Ala	Pro	Ile	Gln	Ser	Ile	200	205	210
Gly	Ser	Ser	Leu	His	Val	Leu	Phe	His	Ser	Asp	Gly	Ser	Lys	Asn	215	220	225
Phe	Asp	Gly	Phe	His	Ala	Ile	Tyr	Glu	Glu	Ile	Thr	Ala	Cys	Ser	230	235	240
Ser	Ser	Pro	Cys	Phe	His	Asp	Gly	Thr	Cys	Val	Leu	Asp	Lys	Ala	245	250	255
Gly	Ser	Tyr	Lys	Cys	Ala	Cys	Leu	Ala	Gly	Tyr	Thr	Gly	Gln	Arg	260	265	270
Cys	Glu	Asn	Leu	Leu	Glu	Glu	Arg	Asn	Cys	Ser	Asp	Pro	Gly	Gly	275	280	285
Pro	Val	Asn	Gly	Tyr	Gln	Lys	Ile	Thr	Gly	Gly	Pro	Gly	Leu	Ile	290	295	300
Asn	Gly	Arg	His	Ala	Lys	Ile	Gly	Thr	Val	Val	Ser	Phe	Phe	Cys	305	310	315
Asn	Asn	Ser	Tyr	Val	Leu	Ser	Gly	Asn	Glu	Lys	Arg	Thr	Cys	Gln	320	325	330
Gln	Asn	Gly	Glu	Trp	Ser	Gly	Lys	Gln	Pro	Ile	Cys	Ile	Lys	Ala	335	340	345
Cys	Arg	Glu	Pro	Lys	Ile	Ser	Asp	Leu	Val	Arg	Arg	Arg	Val	Leu	350	355	360
Pro	Met	Gln	Val	Gln	Ser	Arg	Glu	Thr	Pro	Leu	His	Gln	Leu	Tyr	365	370	375
Ser	Ala	Ala	Phe	Ser	Lys	Gln	Lys	Leu	Gln	Ser	Ala	Pro	Thr	Lys	380	385	390
Lys	Pro	Ala	Leu	Pro	Phe	Gly	Asp	Leu	Pro	Met	Gly	Tyr	Gln	His	395	400	405
Leu	His	Thr	Gln	Leu	Gln	Tyr	Glu	Cys	Ile	Ser	Pro	Phe	Tyr	Arg	410	415	420
Arg	Leu	Gly	Ser	Ser	Arg	Arg	Thr	Cys	Leu	Arg	Thr	Gly	Lys	Trp	425	430	435
Ser	Gly	Arg	Ala	Pro	Ser	Cys	Ile	Pro	Ile	Cys	Gly	Lys	Ile	Glu	440	445	450
Asn	Ile	Thr	Ala	Pro	Lys	Thr	Gln	Gly	Leu	Arg	Trp	Pro	Trp	Gln	455	460	465
Ala	Ala	Ile	Tyr	Arg	Arg	Thr	Ser	Gly	Val	His	Asp	Gly	Ser	Leu	470	475	480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn	485	490	495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly	500	505	510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly	515	520	525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser	530	535	540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile	545	550	555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala	560	565	570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg	575	580	585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly	590	595	600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp	605	610	615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys	620	625	630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp	635	640	645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile	650	655	660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly	665	670	675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser	680	685	690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe	695	700	705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys	710	715	720

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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 233  
tgtcaaggac gcactgccgt catg 24

<210> 234  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 234  
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<210> 235  
<211> 1964  
<212> DNA  
<213> Homo sapiens

<400> 235  
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agctcaactt gaagctttct tgctgcagt gaagcagaga gatagatatt 100  
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150  
caaattccga ttactgttgc tgttgacttt gtgcttgaca gtgggtgggt 200  
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250  
aaggagttca tggctaattt ccataagacc ctcatcttgg ggaagggaaa 300  
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350  
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400  
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450  
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500  
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550  
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tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900  
acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950  
gtgaaaaagc aaaa 1964

<210> 236

<211> 344

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-27

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 4-7, 220-223, 335-338

<223> N-glycosylation sites

<220>

<221> Xylose isomerase proteins

<222> 191-201

<223> Xylose isomerase proteins

<400> 236

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 335 340

<210> 237  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 237  
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<210> 238  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 238  
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<210> 239  
 <211> 46  
 <212> DNA  
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<210> 240  
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 <212> DNA  
 <213> Homo sapiens

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 tctcccgttc cgggccccgc aatggcccag gcagtgtggt cgcgcctcgg 150  
 ccgcatcctc tggcttgctt gcctcctgcc ctgggccccg gcaggggtgg 200  
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 ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300  
 cctggccctg ccgctgacg cccacctcta ccgcttcac tggatccaca 350  
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 cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450  
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 ctggagactc catctgagta cctggaaatt gtctgtgaga accacgggct 1350  
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 ccctccccac cccatctcag tgttaactga ctgctgaact ggagtttcca 1450  
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<210> 241

<211> 423

<212> PRT

<213> Homo sapiens

<400> 241

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Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	35	40	45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	50	55	60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	65	70	75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	80	85	90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	95	100	105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	110	115	120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	125	130	135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	140	145	150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	155	160	165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	170	175	180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	185	190	195	

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
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Tyr Thr Val

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

catttcctta ccctggaccc agctcc 26

<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 243  
gaaaggccca cagcacatct ggcag 25

<210> 244  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 244  
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<210> 245  
<211> 485  
<212> DNA  
<213> Homo sapiens

<400> 245  
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gctcccagat ctgggccgct tgcctcctgc tctcctcct cctcgccagc 100  
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150  
gcaaccccg gacagagctg gagccagggc cagctggatg cccatgttcc 200  
agaggcgaag gaggcgagac acccaacttcc ccatctgcat tttctgctgc 250  
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300  
acctgccctg ccccgctccc ctcccttcc tatttattcc tgctgcccc 350  
gaacataggt cttggaataa aatggctggt tcttttgttt tccaaaaaaa 400  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246  
<211> 84  
<212> PRT  
<213> Homo sapiens

<400> 246  
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu  
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20 25 30  
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala  
35 40 45  
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp  
50 55 60  
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg  
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr  
80

<210> 247  
<211> 2359  
<212> DNA  
<213> Homo sapiens

<400> 247  
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tgctggcctg gcctggatct tccaccatgt tcctgttgct gccttttgat 100  
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaacct 150  
ccttctcggtt ttcacatag tgccagccat ttttgagtc tcctttggta 200  
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250  
ttgagaatgg agcaggaggc caaggagaag aaccaccagc tttacaagcc 300  
ctacaccaac ggaatcattg caaaggatcc cacttcaacta gaagaagaga 350  
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cattatggat gatgaggatg caaagagatt ctacgcagaa gaactggagt 500  
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cggctcacgg tcctgtgggg gttaggagtg ctgattcggc actgctttct 600  
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gccattgcca ggcaggagg acttgtggac ctgctgtggg atgggggcct 1350

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 ggtgaatga 2359

<210> 248  
 <211> 456  
 <212> PRT  
 <213> Homo sapiens

<400> 248  
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 20 25 30  
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu  
 35 40 45  
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg  
 50 55 60  
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro  
 65 70 75



Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	
				80					85					90	
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	
				95					100					105	
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	
				110					115					120	
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	
				125					130					135	
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	
				140					145					150	
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	
				155					160					165	
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	
				170					175					180	
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	
				185					190					195	
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	
				200					205					210	
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	
				215					220					225	
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	
				230					235					240	
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	
				245					250					255	
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	
				260					265					270	
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	
				275					280					285	
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	
				290					295					300	
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	
				305					310					315	
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	
				320					325					330	
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	
				335					340					345	
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	
				350					355					360	
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	
				365					370					375	
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro	
				380					385					390	

Met	Thr	Arg	Glu	Ala	Asp	Glu	Asp	Ala	Val	Gln	Phe	Ala	Asn	Arg
				395					400					405
Val	Lys	Ser	Ala	Ile	Ala	Arg	Gln	Gly	Gly	Leu	Val	Asp	Leu	Leu
				410					415					420
Trp	Asp	Gly	Gly	Leu	Lys	Arg	Glu	Lys	Val	Lys	Asp	Thr	Phe	Lys
				425					430					435
Glu	Glu	Gln	Gln	Lys	Leu	Tyr	Ser	Lys	Met	Ile	Val	Gly	Asn	His
				440					445					450
Lys	Asp	Arg	Ser	Arg	Ser									
				455										

<210> 249  
 <211> 1103  
 <212> DNA  
 <213> Homo sapiens

<400> 249  
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 gccctcggca gcctcggcct ccacacctgg caggcccagg ctgttccac 150  
 catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgtgg 200  
 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250  
 atggcccacc atgccctgct gcgggaatcc tgggaggcag ccaggagac 300  
 ctgggaggac aagcgtcgag ggcttacctt gcccctggc ttcaaagccc 350  
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 tgggagttga atcaggccgt gcggacgggc ggaggctccc gggagctcta 450  
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 agtccaacat ctgccactta ggagccctgg gaacgggtga ccttcatatg 850  
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 ccagccctag cagccttctc cccaaccagg atgttggcct ggggaggcca 950  
 cagcagggct gagggaaactc tgctatgtga tggggacttc ctgggacaag 1000  
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gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

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His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly	
			20						25					30	
Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu	
			35						40					45	
Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala	
				50					55					60	
His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr	
				65					70					75	
Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys	
				80					85					90	
Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn	
				95					100					105	
Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly	
				110					115					120	
Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His	
				125					130					135	
Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly	
				140					145					150	
Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser	
				155					160					165	
Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly	
				170					175					180	
Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe	
				185					190					195	
Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu	
				200					205					210	
Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr	
				215					220					225	
Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro	
				230					235					240	

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 251  
ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252  
<211> 1076  
<212> DNA  
<213> Homo sapiens

<400> 252  
gtggcttcat ttcagtggct gacttccaga gagcaatatg gctggttccc 50  
caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100  
gcctctggac ccgtgaaaga gctggtcggt tccgttgggtg gggccgtgac 150  
tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200  
tcaacacaac ccctcttgtc accatacagc cagaaggggg cactatcata 250  
gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300  
ctccctgaag ctacagaaac tgaagaagaa tgactcaggg atctactatg 350  
tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400  
ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tgggtctgca 450  
gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattgaac 500  
atggggaaga ggatgtgatt tatacctgga aggccttggg gcaagcagcc 550  
aatgagtccc ataatgggtc catcctcccc atctcctgga gatggggaga 600  
aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaact 650  
tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700  
ccagattcct ccattggtcct cctgtgtctc ctgttgggtc cctcctgtct 750  
cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800  
aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850  
cctaacatat gccccattc tggagagaac acagagtacg acacaatccc 900  
tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950  
ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000  
atgccagaca caccaaggct atttgcttat gagaatgtta tctagacagc 1050  
agtgcaactcc cctaagtctc tgctca 1076

<210> 253  
<211> 335  
<212> PRT  
<213> Homo sapiens

<400> 253  
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly	Ser 20	Ala Ala Ser Gly	Pro 25 Val Lys Glu Leu Val 30
Gly Ser Val Gly	Gly 35	Ala Val Thr Phe	Pro 40 Leu Lys Ser Lys Val 45
Lys Gln Val Asp	Ser 50	Ile Val Trp Thr	Phe 55 Asn Thr Thr Pro Leu 60
Val Thr Ile Gln	Pro 65	Glu Gly Gly Thr	Ile 70 Ile Val Thr Gln Asn 75
Arg Asn Arg Glu	Arg 80	Val Asp Phe Pro	Asp 85 Gly Gly Tyr Ser Leu 90
Lys Leu Ser Lys	Leu 95	Lys Lys Asn Asp	Ser 100 Gly Ile Tyr Tyr Val 105
Gly Ile Tyr Ser	Ser 110	Ser Leu Gln Gln	Pro 115 Ser Thr Gln Glu Tyr 120
Val Leu His Val	Tyr 125	Glu His Leu Ser	Lys 130 Pro Lys Val Thr Met 135
Gly Leu Gln Ser	Asn 140	Lys Asn Gly Thr	Cys 145 Val Thr Asn Leu Thr 150
Cys Cys Met Glu	His 155	Gly Glu Glu Asp	Val 160 Ile Tyr Thr Trp Lys 165
Ala Leu Gly Gln	Ala 170	Ala Asn Glu Ser	His 175 Asn Gly Ser Ile Leu 180
Pro Ile Ser Trp	Arg 185	Trp Gly Glu Ser	Asp 190 Met Thr Phe Ile Cys 195
Val Ala Arg Asn	Pro 200	Val Ser Arg Asn	Phe 205 Ser Ser Pro Ile Leu 210
Ala Arg Lys Leu	Cys 215	Glu Gly Ala Ala	Asp 220 Asp Pro Asp Ser Ser 225
Met Val Leu Leu	Cys 230	Leu Leu Leu Val	Pro 235 Leu Leu Leu Ser Leu 240
Phe Val Leu Gly	Leu 245	Phe Leu Trp Phe	Leu 250 Lys Arg Glu Arg Gln 255
Glu Glu Tyr Ile	Glu 260	Glu Lys Lys Arg	Val 265 Asp Ile Cys Arg Glu 270
Thr Pro Asn Ile	Cys 275	Pro His Ser Gly	Glu 280 Asn Thr Glu Tyr Asp 285
Thr Ile Pro His	Thr 290	Asn Arg Thr Ile	Leu 295 Lys Glu Asp Pro Ala 300
Asn Thr Val Tyr	Ser 305	Thr Val Glu Ile	Pro 310 Lys Lys Met Glu Asn 315
Pro His Ser Leu	Leu	Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala

320

325

330

Tyr Glu Asn Val Ile  
335

<210> 254  
<211> 1053  
<212> DNA  
<213> Homo sapiens

<400> 254  
ctgggttcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50  
gggtcagcag cctctggacc cgtgaaagag ctggtcgggtt ccgttggtgg 100  
ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150  
tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200  
actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250  
tggaggctac tccctgaagc tcagcaaact gaagaagaat gactcaggga 300  
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccag 350  
gagtacgtgc tgcatgtcta cgagcacctg tcaaagccta aagtcaccat 400  
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450  
gcatggaaca tggggaagag gatgtgattt atacctggaa ggcctgggg 500  
caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550  
atggggagaa agtgatatga ccttcatctg cgttgccagg aaccctgtca 600  
gcagaaaactt ctcaagcccc atccttgcca ggaagctctg tgaaggtgct 650  
gctgatgacc cagattcctc catggctcctc ctgtgtctcc tgttggtgcc 700  
cctcctgctc agtctctttg tactggggct atttcttttg tttctgaaga 750  
gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800  
cgggaaactc ctaacatatg ccccatctct ggagagaaca cagagtacga 850  
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900  
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950  
ctgctcacga tgccagacac accaaggcta ttgcctatg agaatgttat 1000  
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050  
aaa 1053

<210> 255  
<211> 860  
<212> DNA  
<213> Homo sapiens

<400> 255  
gaaagacgtg gtctgacag acagacaatc ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100  
aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150  
gaatggcata ctattatcct ggccctctgac aaaagagaaa agatagaaga 200  
acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250  
ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300  
tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350  
tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400  
ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450  
gggctctatg gccgagaacc agatttigagt tcagacatca aggaaagggtt 500  
tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550  
tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600  
gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650  
tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700  
ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750  
acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacaccctt 800  
gacaattttt catgaaatta ttctcttccc tgttcaataa atgattaccc 850  
ttgcacttaa 860

<210> 256

<211> 180

<212> PRT

<213> Homo sapiens

<400> 256

Met	Lys	Met	Leu	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Thr	Leu	Val	Cys
1				5					10					15
Val	His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Gly	Arg	Asn	Phe	Asn	Val
				20					25					30
Glu	Lys	Ile	Asn	Gly	Glu	Trp	His	Thr	Ile	Ile	Leu	Ala	Ser	Asp
				35					40					45
Lys	Arg	Glu	Lys	Ile	Glu	Glu	His	Gly	Asn	Phe	Arg	Leu	Phe	Leu
				50					55					60
Glu	Gln	Ile	His	Val	Leu	Glu	Asn	Ser	Leu	Val	Leu	Lys	Val	His
				65					70					75
Thr	Val	Arg	Asp	Glu	Glu	Cys	Ser	Glu	Leu	Ser	Met	Val	Ala	Asp
				80					85					90
Lys	Thr	Glu	Lys	Ala	Gly	Glu	Tyr	Ser	Val	Thr	Tyr	Asp	Gly	Phe
				95					100					105
Asn	Thr	Phe	Thr	Ile	Pro	Lys	Thr	Asp	Tyr	Asp	Asn	Phe	Leu	Met
				110					115					120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257  
 <211> 766  
 <212> DNA  
 <213> Homo sapiens

<400> 257  
 ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50  
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100  
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150  
 tctcaaaacc ccattctcttg ctttgagtggt tgggtcccag gaattatagg 200  
 agcaggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250  
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300  
 agtgtgatca cagtcattgg tgctctgtat tgcattgctga tatccatcca 350  
 ggctctctta aaaggtcctc tcattgtgtaa ttctccaagc aacagtaatg 400  
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450  
 ttcaacttgc agtgggtttt caatgactct tgtgcacctc ctactgggtt 500  
 caataaacc accagtaacg acaccatggc gagggtgctg agagcatcta 550  
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600  
 gtatttttag gtctattgct tgttggaatt ctggaggtcc tgtttgggct 650  
 cagtcagata gtcacgggtt tccttggtg tctgtgtgga gtctctaagc 700  
 gaagaagtca aattgtgtag ttaaatggga ataaatgta agtatcagta 750  
 gtttgaaaaa aaaaaa 766

<210> 258  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 258  
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu  
 1 5 10 15  
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu  
 20 25 30  
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile



	35	40	45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu	50	55	60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg	65	70	75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe	80	85	90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser	95	100	105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser	110	115	120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp	125	130	135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser	140	145	150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr	155	160	165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu	170	175	180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu	185	190	195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile	200	205	210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg	215	220	225
Ser Gln Ile Val			

<210> 259  
 <211> 434  
 <212> DNA  
 <213> Homo sapiens

<400> 259  
 gtcgaatcca aatcactcat tgtgaaagct gagctcacag ccgaataagc 50  
 caccatgagg ctgtcagtgt gtctcttgat ggtctcgctg gccctttgct 100  
 gctaccaggc ccatgctctt gtctgccag ctgttgcttc tgagatcaca 150  
 gtctttttat tottaagtga cgctgcggtg aacctccaag ttgccaaact 200  
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250  
 ccgatcagat atctttttaag aaacgactct cattgaaaaa gtcctgggtg 300  
 aaatagtga aaaatgtggt gtgtgacatg taaaaatgct caacctggtt 350  
 tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaagggt 400

tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260  
<211> 83  
<212> PRT  
<213> Homo sapiens

<400> 260  
Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys  
1 5 10 15  
Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu  
20 25 30  
Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln  
35 40 45  
Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu  
50 55 60  
Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu  
65 70 75  
Ser Leu Lys Lys Ser Trp Trp Lys  
80

<210> 261  
<211> 636  
<212> DNA  
<213> Homo sapiens

<400> 261  
atccgttctc tgcgctgccca gctcaggtga gccctcgcca aggtgacctc 50  
gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100  
ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150  
cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200  
agagagtgac cctggccctt ctctacttg caggcctgac tgccttgga 250  
gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300  
aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350  
ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400  
cagcacagtc ctgtacctga gaaggccatc ccactcatca ctccaggctc 450  
tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500  
taaacctggc cccagcacc tcctcccctg ggaggcotta tcctcaagga 550  
aggacttctc tccaaggga ggctgttagg cccctttctg atcaggaggc 600  
ttctttatga attaaactcg cccaccacc ccctca 636

<210> 262  
<211> 89  
<212> PRT  
<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr  
1 5 10 15  
Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe  
20 25 30  
Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly  
35 40 45  
Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys  
50 55 60  
Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu  
65 70 75  
Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys  
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50  
ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100  
actcctgctg ctggttgtgg gctcctggct actcgccgcg atcctggctt 150  
ggacctatgc cttctataac aactgccgcc ggctccagtg tttcccacag 200  
ccccaaaaac ggaactgggt ttggggtcac ctgggcctga tcaactctac 250  
agaggaggggc ttgaaggact cgaccagat gtgggccacc tattcccagg 300  
gctttacggt atggctgggt cccatcatcc ccttcatcgt tttatgccac 350  
cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcacccaa 400  
ggataatctc ttcattcagg ttctgaagcc ctggctggga gaagggatac 450  
tgctgagtgg cggtgacaag tggagccgcc accgtcggat gctgacgccc 500  
gccttcatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550  
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600  
gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650  
cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700  
atatattgcc accatcttgg agctcagtgc ccttgtagag aaaagaagcc 750  
agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800  
cggcgcttcc acagggcctg ccgcctggtg catgacttca cagacgctgt 850  
catccgggag cggcgctgca cctccccac tcagggtatt gatgattttt 900  
tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000  
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050  
 tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100  
 tgccgacagg aggtgcaaga gcttotgaag gaccgcgatc ctaaagagat 1150  
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200  
 agagcctgag gttacatccc ccagctccct tcatctcccg atgctgcacc 1250  
 caggacattg ttctcccaga tggccgagtc atocccaaag gcattacctg 1300  
 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350  
 ctgaggtcta cgaccccttc cgctttgacc cagagaacag caaggggagg 1400  
 tcacctctgg cttttattcc tttctccgca gggcccagga actgcatcgg 1450  
 gcaggcgttc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500  
 tgcacttccg gttcctgcca gaccacactg agccccgcag gaagctggaa 1550  
 ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agcccctgaa 1600  
 tgtaggcttg cagtgacttt ctgaccatc cacctgtttt tttgcagatt 1650  
 gtcatgaata aaacggtgct gtcaaa 1676

<210> 264

<211> 524

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala
1				5					10					15
Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu
				20					25					30
Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys
				35					40					45
Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe
				50					55					60
Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys
				65					70					75
Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val
				80					85					90
Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp
				95					100					105
Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys
				110					115					120
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly
				125					130					135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	140	145	150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	155	160	165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	170	175	180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	185	190	195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	200	205	210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	215	220	225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	230	235	240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	245	250	255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	260	265	270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	275	280	285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	290	295	300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	305	310	315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	320	325	330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	335	340	345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	350	355	360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	365	370	375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	380	385	390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	395	400	405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	410	415	420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	425	430	435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	440	445	450

Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro
				455					460					465
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val
				470					475					480
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His
				485					490					495
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly
				500					505					510
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln	
				515					520					

<210> 265  
 <211> 584  
 <212> DNA  
 <213> Homo sapiens

<400> 265  
 caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50  
 ctggcctcct gctgtttgct ttccacagga ttcttaaata ctctcttata 100  
 tcttcctctc cttgactcca gggaaatata ctttcaactc tcagcacctc 150  
 atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200  
 cagatattgc cagagatgct gggatgcagaa agaggggata ttctcaggaa 250  
 agcagactca agtaccaaca tttttaaccc aagaggaaat ttgagaaagt 300  
 ttcaggattt ctctggacaa gatcctaaca ttttactgag tcattctttg 350  
 gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400  
 gaaataactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450  
 acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500  
 tggagaaaaa ctaggcaaac tacaccctgt tcattgtttac ctggaaaata 550  
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 266  
 Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu  
 1 5 10 15  
 Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser  
 20 25 30  
 Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu  
 35 40 45  
 Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu  
 50 55 60

Gly	Ala	Glu	Arg	Gly	Asp	Ile	Leu	Arg	Lys	Ala	Asp	Ser	Ser	Thr
				65					70					75
Asn	Ile	Phe	Asn	Pro	Arg	Gly	Asn	Leu	Arg	Lys	Phe	Gln	Asp	Phe
				80					85					90
Ser	Gly	Gln	Asp	Pro	Asn	Ile	Leu	Leu	Ser	His	Leu	Leu	Ala	Arg
				95					100					105
Ile	Trp	Lys	Pro	Tyr	Lys	Lys	Arg	Glu	Thr	Pro	Asp	Cys	Phe	Trp
				110					115					120

Lys Tyr Cys Val

<210> 267  
 <211> 654  
 <212> DNA  
 <213> Homo sapiens

<400> 267  
 gaacatTTTT agttccaag gaatgtacat cagccccacg gaagctaggc 50  
 cacctctggg atgggggttg tggtttaaaa caaacgccag tcctctata 100  
 taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150  
 acctgtctgc aaccagctg aggccatgcc ctcccaggg accgtctgca 200  
 gcctcctgct cctcggcatg ctctggctgg acttggccat ggcaggctcc 250  
 agcttctga gccctgaaca ccagagagtc cagcagagaa aggagtogaa 300  
 gaagccacca gccaagctgc agccccgagc tctagcaggc tggctccgcc 350  
 cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400  
 ttcaacgccc ctttgatgt tggaatcaag ctgtcagggg ttcagtagca 450  
 gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500  
 aggccaaaga ggccccagcc gacaagtgat cgccacaag cttactcac 550  
 ctctctctaa gtttagaagc gtcctctggt cttttcgctt gcttctgcag 600  
 caactccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650  
 tgta 654

<210> 268  
 <211> 117  
 <212> PRT  
 <213> Homo sapiens

<400> 268  
 Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Leu Gly Met  
 1 5 10 15  
 Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro  
 20 25 30  
 Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro  
 35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269  
 <211> 1332  
 <212> DNA  
 <213> Homo sapiens

<400> 269  
 cggccacagc tggcatgctc tgccatgatcg ccacccctgct gtatgtcctc 50  
 gtccagtacc tcgtgaaccc cgggggtgctc cgcacggacc ccagatgtca 100  
 agaatatgaa cacgtggctg ctgttcctcc ccctgttccc ggtgcaggtg 150  
 cagaccctga tagtcgtgat catcgggatg ctogtgctcc tgctggactt 200  
 tcttggcttg gtgcacctgg gccagctgct catcttccac atctacctga 250  
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300  
 gctgctcatc ttacacctct acttgagtat gtccctaacc ctgagcccc 350  
 cagccctggg gccagagtct ttgtcccccg tgtgogcatg tgttcagggt 400  
 cagcctctcc cagaagtgag atcatggaca aaaagggcaa atcacaggaa 450  
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500  
 gccgagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550  
 tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600  
 aaataaggac aggtggactt ccaaaaacac aagtagaaat tctaacaatg 650  
 aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700  
 tgtggtcttg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750  
 gttgctgaac gacggagggt aaactcccc gccccagaa aacctgtgtt 800  
 ggaagtaaca acaacctccc tgctcctggc accagccgtt ttggtcatgg 850  
 tgggccagct gcaaagcgtc ttccattctc tgggcagtgg tggccccgag 900  
 gctgtggcct ctcagggggg ttctgtggac acgggcagca gactgtgtcc 950  
 aggccagccc ccaagaatgc cctgctcctg acagcttggc caaccctgg 1000  
 tcagggcaga gggagttggg tgggtcaggc tctgggctca cctccatctc 1050



cagagcatcc cctgcctgca gttgtggcaa gaacgcccag ctcagaatga 1100  
 acacacccca ccaagagcct ccttgttcat aaccacaggt taccctacaa 1150  
 accactgtcc ccacacaacc ctgggggatgt tttaaaacac acacctctaa 1200  
 cgcatactctt acagtcactg ttgtcttgcc tgagggttga atttttttta 1250  
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270  
 <211> 142  
 <212> PRT  
 <213> Homo sapiens

<400> 270  
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val  
 1 5 10 15  
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu  
 20 25 30  
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His  
 35 40 45  
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln  
 50 55 60  
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr  
 65 70 75  
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val  
 80 85 90  
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu  
 95 100 105  
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met  
 110 115 120  
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro  
 125 130 135  
 Ala Gly Val Val Pro Gly Ala  
 140

<210> 271  
 <211> 1484  
 <212> DNA  
 <213> Homo sapiens

<400> 271  
 ggagtgcaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50  
 accatggcca agatggagct ctogaaggcc ttctctggcc agcggacact 100  
 cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150  
 tgctcagcaa ctactgggttt gtgggcacac agaaggtgcc caagcccctg 200  
 tgcgagaaag gtctggcagc caagtgcttt gacatgccag tgcacctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300  
 ctggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350  
 tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400  
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450  
 ccacgttgca aggcccatgt caccacctc tccgatttgg agggaagcgg 500  
 ttgatggaga aggcttccct cccctccctt cccttggggc tttgtggcaa 550  
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600  
 ttcatcagct tcctcctgct actaacagac ttgctactca ctgggaacct 650  
 tgcctgtggg ctcaaaactga gcgcctttgc tgotgtttcc tctgtcctgt 700  
 caggtctcct ggggatggtg gccacatga tgtattcaca agtcttccaa 750  
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800  
 tggctggggc ttctacatgg cctggctctc cttcacctgc tgcattggcg 850  
 cggctgtcac caccttcaac acgtacacca ggatggtgct ggagttcaag 900  
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950  
 ccatcagtgt ttccctcggc ggctgtcaag tgcagcccc accgtgggtc 1000  
 ctttgaccag ctaccaccag tatcataatc agcccatcca ctctgtctct 1050  
 gagggagtgc acttctactc cgagctgcgg aacaagggat ttcaaagagg 1100  
 ggccagccag gagctgaaag aagcagttag gtcattctgta gaggaagagc 1150  
 agtgtagga gttaagcggg tttggggagt aggcttgagc cctaccttac 1200  
 acgtctgctg attatcaaca tgtgtttaag ccaacatccg tctcttgagc 1250  
 atggttttta gaggtctacga ataaggctat gaataagggt tatctttaag 1300  
 tcctaaggga ttcttgggtg ccactgctct cttttcctct acagctccat 1350  
 cttgtttcac ccaccccaca tctcacacat ccagaattcc cttctttact 1400  
 gatagtttct gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450  
 gtaaaataca cttcccgacc ttaaggatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met	Ala	Lys	Met	Glu	Leu	Ser	Lys	Ala	Phe	Ser	Gly	Gln	Arg	Thr
1				5					10					15

Leu	Leu	Ser	Ala	Ile	Leu	Ser	Met	Leu	Ser	Leu	Ser	Phe	Ser	Thr
				20				25						30

Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

35					40					45				
Pro	Lys	Pro	Leu	Cys	Glu	Lys	Gly	Leu	Ala	Ala	Lys	Cys	Phe	Asp
				50					55					60
Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu
				65					70					75
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe
				80					85					90
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val
				95					100					105
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro
				110					115					120
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu
				125					130					135
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu
				140					145					150
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly
				155					160					165
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg
				170					175					180
Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr
				185					190					195
His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys
				200					205					210
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His
				215					220					225
Asp	Val	Phe	Thr	Ser	Leu	Pro	Ser	Asp	Cys	Gln	Leu	Gly	Ser	Arg
				230					235					240
Arg	Leu	Glu	Thr	Thr	Cys	Leu	Glu	Leu	Trp	Leu	Gly	Leu	Leu	His
				245					250					255
Gly	Leu	Ala	Leu	Leu	His	Leu	Leu	His	Gly	Val	Gly	Cys	His	His
				260					265					270
Leu	Gln	His	Val	His	Gln	Asp	Gly	Ala	Gly	Val	Gln	Val	Gln	Ala
				275					280					285

<210> 273

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 273

aactggaagg aaagaaagaa aggtcagctt tggcccagat gtggttacct 50  
cttggtctcc tgtctttatg tctttctcct cttcctattc tgtcatctcc 100  
ctcaacttaag totcaggcct gtcagcagct cctgtggaca ttgccatccc 150  
ctctggttagc cttcagagca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250  
 tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300  
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350  
 cctgccctat tctcctccc aagtctgttc tcttattgtc aacctcagca 400  
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450  
 tgggcagatt accatgcaag ccccgaggaga aatggaggag cttttagtagc 500  
 acctccctgt cagccagtat taacatgtcc ccttccccct gccccgccgt 550  
 agattcagga cattcgcccc tgtgtgccac caaaccagga ctttcccctt 600  
 ggcttggcat ccctggctct ctcttggtac ccagcaagac gtctgttcca 650  
 gggcagtgtg gcatctttca agctccgtta ctatggcgat ggccatgatg 700  
 ttacaatccc acttgctga ataatacaagt gggaagggga agcagaggga 750  
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800  
 accaaagggga agcaacagga acttctgcaa ctggttttta toggaaagat 850  
 catcctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900  
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgctgggag 950  
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcact 1000  
 cagcctcccc gtagccatct ccagggtgac ggaaccctgt gtattacctg 1050  
 ctggaaccaa ggaaactaac aatgtaggtt actagtgaat accccaatgg 1100  
 tttctccaat tatgcccatt ccacaaaaac aataaaacaa aattctctaa 1150  
 cactgaaa 1158

<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

Met	Trp	Leu	Pro	Leu	Gly	Leu	Leu	Ser	Leu	Cys	Leu	Ser	Pro	Leu	1	5	10	15
Pro	Ile	Leu	Ser	Ser	Pro	Ser	Leu	Lys	Ser	Gln	Ala	Cys	Gln	Gln	20	25	30	
Leu	Leu	Trp	Thr	Leu	Pro	Ser	Pro	Leu	Val	Ala	Phe	Arg	Ala	Asn	35	40	45	
Arg	Thr	Thr	Tyr	Val	Met	Asp	Val	Ser	Thr	Asn	Gln	Gly	Ser	Gly	50	55	60	
Met	Glu	His	Arg	Asn	His	Leu	Cys	Phe	Cys	Asp	Leu	Tyr	Asp	Arg	65	70	75	
Ala	Thr	Ser	Pro	Pro	Leu	Lys	Cys	Ser	Leu	Leu	80	85						

<210> 275  
<211> 2694  
<212> DNA  
<213> Homo sapiens

<400> 275  
gtagcgcgtc ttgggtctcc cggctgccgc tgcctgccgc gccgcctcgg 50  
gtcgtggagc caggagcgac gtcaccgcca tggcaggcat caaagctttg 100  
attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150  
atgtgccctt ccaatataca acaaatactg gccctctttt gttctatttt 200  
tttacatcct ttcacctatt ccatactgca tagcaagaag attagtggat 250  
gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300  
aacgggcatt gtcgtgtcag cttttggact ccctattgta ttgtccagag 350  
cacatctgat tgagtgggga gcttgtgcac ttgttctcac aggaaacaca 400  
gtcatctttg caactatact aggccttttc ttggtctttg gaagcaatga 450  
cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500  
atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggca 550  
gttaatgctg aatggtatag caagcctctt gggggtattt taggtgctcc 600  
cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650  
attaaaagga ttttctcttt tggaaaagct tgactgattt cacacttata 700  
tatagtatgc tttttgtggt gtccctgctga atttaaatat ttatgtgttt 750  
ttcctgttag gttgattttt tttggaatca atatgcaatg ttaaactt 800  
ttttaatgta atcatttgca ttggttagga attcagaatt ccgccggctc 850  
tattaactgg caagtacatc ttttctctta aaattattta gcctccatta 900  
ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950  
cccaatgtta tgcagacata cagacggttg gcatacgta tagactgtat 1000  
actcagtga aatatagctg catttatacc tcagaggggc caagtgttaa 1050  
tgcccatgcc ctccgttaag ggttgttggg ttactggta gacagatgtt 1100  
ttgtggattg aaaattattt tatggaattg ctacagagga gtgcttttct 1150  
totcaattgt tagaagaatt tatgttaaac tttaaggtaa ggggtgtaaaa 1200  
acatTTTTga gataagggtt ttatttatgt ttattattgt tagagtgagt 1250  
tgcaatgtgg gaagaaatga cattgaaatt ccagtTTTTg aatcctgttt 1300  
ctatttataa gtgaaatttg tgatctccta tcaacctttc atgttttacc 1350  
ctgttaaaaat ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400  
gtttgcatca tatatgccag aaaccttcc tctgcttcct ctttttgact 1450

tatttggtat gttgtatata ttacataaaa taacttttca aatatagttt 1500  
aataacactt agaagtgttt acttacctgg aaaataattg ctatgccgta 1550  
cattcagagt gccccctccc ctgcaaggcc ttgccatgat taacaagtaa 1600  
cttgttagtc ttacagataa ttcatgcatt aacagtttaa gatttagacc 1650  
atggtaatag tagttcttat tctctaaggt tataatcatat gtaattttaa 1700  
agtattttta agacaagttt cctgtatacc tctgaactgt tttgattttg 1750  
agttcatcat gatagatctg ctgtttcctt ataaaaggca tttgttgtgt 1800  
gagttaatgc aaagtagcca agtccagcta tatagcagct tcagaaacat 1850  
acctgaccaa aaaattccca gtaaccaggc atgatcaatt tatagtggtc 1900  
gtttacatct aataattatc aggacttttt tcaggagtgg gttataaaaa 1950  
cattcaagtt ggtctgacag tattttgta aggatatttg tttgtatgtt 2000  
tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050  
aatcatgaca gctgtctgtt gttttatgaa gtttatttct caagaaaatg 2100  
ggaataaatt tgggatttgt tcagcttttt tactaaagat gcctaaagcc 2150  
acagggtttta ttgcctaact taagccatga ctttttagata tgagatgacg 2200  
ggaagcagga cgaaatatcg gcgtgtggct ggagccttcc cactggaggc 2250  
tgaaagtggc ttgtggtatt ataatgttca gatttcaaga ggaaggtgca 2300  
ggtacacatg agttagagag ctggtgagac agttgggaac totttgtgct 2350  
tgtgatctac tggacttttt ttttgcagga agtgcattct ctggtccttc 2400  
cctattttct gttctggatg tcagtgcagt gcactgctac tgttttatcc 2450  
acttgccac agactttttc taacagctgc gtattatttc tatatactaa 2500  
ttgcattggc agcattgtgt ctttgacctt gtatactagc ttgacatagt 2550  
gctgtctctg atttctaggc tagttacttg agatatgaat tttccataga 2600  
atatgcactg atacaacatt accattcttc tatggaaaga aaacttttga 2650  
tgatgaaaca ataaagattt taaatatcta ttttaaaaaa aaaa 2694

<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

Met	Ala	Gly	Ile	Lys	Ala	Leu	Ile	Ser	Leu	Ser	Phe	Gly	Gly	Ala
1				5					10					15

Ile	Gly	Leu	Met	Phe	Leu	Met	Leu	Gly	Cys	Ala	Leu	Pro	Ile	Tyr
			20						25					30

Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35		40		45
Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp	50		55		60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe	110		115		120
Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp	125		130		

<210> 277  
 <211> 4104  
 <212> DNA  
 <213> Homo sapiens

<400> 277  
 cccacgcgtc cgcccacgcg tccgcccacg cgtccgccca cgcgtccgcc 50  
 cacgcgtccg cccacgcgtc cgcccacgcg tccggtgcaa gctcgcgcgcg 100  
 cacactgcct ggtggaggga aggagcccgg gcgcctctcg ccgctccccg 150  
 cgcgcgcgtc cgcacctccc caccgcccgc cgcgcgcgcg ccgcgcgcgcg 200  
 caaagcatga gtgagccgcg tctctgcagc tgcccggggc gcgaatggca 250  
 ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtggc cgtttccaat 300  
 gacggacatt aaccagactg tcagatcctg gggagtcgcg agccccgagt 350  
 ttggagtttt ttccccccac aacgtcacag tccgaactgc agagggaaag 400  
 gaaggcggca ggaaggcgaa gctcgggctc cggcacgtag ttgggaaact 450  
 tgccgggtcct agaagtcgcc tccccgcctt gccggccgcc cttgcagccc 500  
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<210> 278  
 <211> 522  
 <212> PRT  
 <213> Homo sapiens

<400> 278

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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln	20	25	30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	35	40	45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	50	55	60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	65	70	75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	80	85	90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	95	100	105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	110	115	120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	125	130	135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	140	145	150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	155	160	165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	170	175	180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	185	190	195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	200	205	210	
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn	215	220	225	
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu	230	235	240	
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val	245	250	255	
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr	260	265	270	
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu	275	280	285	

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu	290	295	300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu	305	310	315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser	320	325	330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro	335	340	345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe	350	355	360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu	365	370	375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser	380	385	390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr	395	400	405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu	410	415	420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu	425	430	435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp	440	445	450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val	455	460	465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met	470	475	480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn	485	490	495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys	500	505	510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val				515	520	

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

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 cacggacttc gacgtcgag ccaactggag ccagaaccgg accccgtgcg 150  
 ccggcggcgc cgttgagttc ccggcggaca agatgggtgc agtcctggtg 200  
 caagaaggtc acgccgtctc agacatgctc ctgccgctgg atggggaact 250  
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 ccagcccct 709

<210> 281  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 281  
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 Leu Thr Gln Ala Val Ser Lys Leu Trp Val Pro Asn Thr Asp Phe  
                     20                    25                    30  
 Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly  
                     35                    40                    45  
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val  
                     50                    55                    60  
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly  
                     65                    70                    75  
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val  
                     80                    85                    90  
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg  
                     95                    100                    105  
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser  
                     110                    115                    120  
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val  
                     125                    130                    135

Pro	Cys	Arg	His	Asp	Asp	Val	Phe	Phe	Pro	Pro	Ser	Ala	Ser	Phe
				140					145					150
Arg	Val	Gly	Leu	Gly	Pro	Gly	Ala	Ser	Pro	Val	Arg	Val	Arg	Ser
				155					160					165
Ile	Ser	Ala	Leu	Gly	Arg	Thr	Phe	Thr	Arg	Asp	Glu	Asp	Leu	Ala
				170					175					180
Val	Phe	Leu	Ala	Ser	Arg	Ala	Gly	Arg	Leu	Arg	Phe	His	Gly	Pro
				185					190					195
Gly	Ala	Leu	Ser	Val	Gly	Pro	Glu	Asp	Cys	Ala	Asp	Pro	Ser	Gly
				200					205					210
Cys	Val	Cys	Gly	Asn	Ala	Glu	Ala	Gln	Pro	Trp	Ile	Cys	Ala	Ala
				215					220					225

Leu Leu Gln Pro

<210> 282  
 <211> 644  
 <212> DNA  
 <213> Homo sapiens

<400> 282  
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 tgtgttttgc acttaccctg tgttctgcct tttggtggca taacaaggga 150  
 cttgcactta tcttctgcat tttgcagtct ttggcattga cgtggtacag 200  
 cctttccttc ataccatttg caagggatgc tgtgaagaag tgttttgccg 250  
 tgtgttctgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300  
 tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350  
 tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400  
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 644

<210> 283  
 <211> 77  
 <212> PRT  
 <213> Homo sapiens

<400> 283  
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 Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

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Cys	Ser	Ala	Phe	Trp	Trp	His	Asn	Lys	Gly	Leu	Ala	Leu	Ile	Phe
			35						40					45
Cys	Ile	Leu	Gln	Ser	Leu	Ala	Leu	Thr	Trp	Tyr	Ser	Leu	Ser	Phe
			50						55					60
Ile	Pro	Phe	Ala	Arg	Asp	Ala	Val	Lys	Lys	Cys	Phe	Ala	Val	Cys
			65						70					75

Leu Ala

<210> 284  
 <211> 2623  
 <212> DNA  
 <213> Homo sapiens

<400> 284  
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 ctcccggttg tccaaactaa tacggactga acggatcgct gcgaggggtgg 150  
 gagagaaaat tagggggaga aaggacagag agagcaacta ccattccatag 200  
 ccagatagat tatcttacac tgaactgatc aagtaacttg aaaatgactt 250  
 cgaaatztat cttggtgtcc ttcatacttg ctgcactgag tctttcaacc 300  
 accttttctc tccaactaga ccagcaaaag gttctactag tttcttttga 350  
 tggattccgt tgggattact tatataaagt tccaacgccc cattttcatt 400  
 atattatgaa atatggtgtt cacgtgaagc aagttactaa tgtttttatt 450  
 aaaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500  
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 gcgacaccaa tatggatcac aaaccagagg gcaggacata ctagtgggtgc 650  
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 accagtacct ggataaagac cactataccc tgattgatca atctccagta 1050  
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aagaagtgta taagtgttga aaattaaatg tgataacctt tgaaccttga 2250  
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tttgcctctt tgaaaattaa atcactatta attacattaa aaatcaaatt 2600  
ggataaaaaa aaaaaaaaaa aaa 2623

<210> 285

<211> 477  
 <212> PRT  
 <213> Homo sapiens

<400> 285

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Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	35	40	45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	50	55	60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	65	70	75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	80	85	90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	95	100	105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	110	115	120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	125	130	135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	140	145	150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	155	160	165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	170	175	180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	185	190	195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	200	205	210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	215	220	225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	230	235	240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	245	250	255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	260	265	270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	275	280	285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp				



290										295					300				
Val	Pro	Glu	Arg	Trp	His	Tyr	Lys	Tyr	Asn	Ser	Arg	Ile	Gln	Pro					
				305					310					315					
Ile	Ile	Ala	Val	Ala	Asp	Glu	Gly	Trp	His	Ile	Leu	Gln	Asn	Lys					
				320					325					330					
Ser	Asp	Asp	Phe	Leu	Leu	Gly	Asn	His	Gly	Tyr	Asp	Asn	Ala	Leu					
				335					340					345					
Ala	Asp	Met	His	Pro	Ile	Phe	Leu	Ala	His	Gly	Pro	Ala	Phe	Arg					
				350					355					360					
Lys	Asn	Phe	Ser	Lys	Glu	Ala	Met	Asn	Ser	Thr	Asp	Leu	Tyr	Pro					
				365					370					375					
Leu	Leu	Cys	His	Leu	Leu	Asn	Ile	Thr	Ala	Met	Pro	His	Asn	Gly					
				380					385					390					
Ser	Phe	Trp	Asn	Val	Gln	Asp	Leu	Leu	Asn	Ser	Ala	Met	Pro	Arg					
				395					400					405					
Val	Val	Pro	Tyr	Thr	Gln	Ser	Thr	Ile	Leu	Leu	Pro	Gly	Ser	Val					
				410					415					420					
Lys	Pro	Ala	Glu	Tyr	Asp	Gln	Glu	Gly	Ser	Tyr	Pro	Tyr	Phe	Ile					
				425					430					435					
Gly	Val	Ser	Leu	Gly	Ser	Ile	Ile	Val	Ile	Val	Phe	Phe	Val	Ile					
				440					445					450					
Phe	Ile	Lys	His	Leu	Ile	His	Ser	Gln	Ile	Pro	Ala	Leu	Gln	Asp					
				455					460					465					
Met	His	Ala	Glu	Ile	Ala	Gln	Pro	Leu	Leu	Gln	Ala								
				470					475										

<210> 286  
 <211> 1337  
 <212> DNA  
 <213> Homo sapiens

<400> 286  
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 agggaggtga agaaaccaag acgcagagag gccaaagccc ttgccttggg 150  
 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200  
 aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcagggccaa 250  
 ggtggctccc gctgagagga tgagcaagtt ctttaaggcac ttcacggtcg 300  
 tgggagacga ctaccatgcc tggaacatca actacaagaa atgggagaat 350  
 gaagaggagg aggaggagga ggagcagcca ccacccacac cagtctcagg 400  
 cgaggaaggc agagctgcag cccctgacgt tgcccctgcc cctggccccg 450  
 caccagggc ccccttgac ttcaggggca tgttgaggaa actgttcagc 500

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 cattcatcct ggacattgtc ctctgttcc aggagcacca gtttgaggct 800  
 ctgggcctgc tgattctgct ccggtgtggt cgggtggccc ggatcatcaa 850  
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 ctctcacaca gccaccgtga aagtccgtga gtaaaatgtg ctgtgtacag 1100  
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 agagaacctg acagtcaact gccagttatc acttcagatt acaaatacaca 1200  
 cagagcatct gcctgttttc aatcacaga gaacaaaacc aaaatctata 1250  
 aagatattct gaaaatatga cagaatttga caaataaaag cataaacgtg 1300  
 taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 1337

<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val	1	5	10	15
Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val	20	25	30	
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp	35	40	45	
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	50	55	60		
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Ala	Pro	Asp	Val	Ala	65	70	75	
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly	80	85	90	
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile	95	100	105	
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu	110	115	120	

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
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<210> 288  
 <211> 3334  
 <212> DNA  
 <213> Homo sapiens

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 cccagaccga gttccagtac tttgagtcga aggggctccc tgccgagctg 150  
 aagtccattt tcaagctcag tgtcttcac cctcccagg aattctccac 200  
 ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250  
 atgggcagct agactttgaa gaatttgtcc attatctoca agatcatgag 300  
 aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggacg 350  
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 cgtggaaaac atccccgaga tcatcctcta ctggaagcat tccacgatct 550  
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 cacgagaggc ttgtggcagg gtccttggca ggggccatcg cccagagcag 950  
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 gccagtactc aggaatgctg gactgcgcca ggaggatcct ggccagagag 1050  
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 cccctatgcc ggcatcgacc ttgcagtcta cgagacgctc aagaatgcct 1150  
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 aattaagaaa gaattggacg ttagaagttg tcattttaaag cagccttcta 3250  
 ataaagttgt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289

<211> 469

<212> PRT

<213> Homo sapiens

<400> 289

Met	Leu	Cys	Leu	Cys	Leu	Tyr	Val	Pro	Val	Ile	Gly	Glu	Ala	Gln
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Thr	Glu	Phe	Gln	Tyr	Phe	Glu	Ser	Lys	Gly	Leu	Pro	Ala	Glu	Leu
			20						25					30
Lys	Ser	Ile	Phe	Lys	Leu	Ser	Val	Phe	Ile	Pro	Ser	Gln	Glu	Phe
			35						40					45
Ser	Thr	Tyr	Arg	Gln	Trp	Lys	Gln	Lys	Ile	Val	Gln	Ala	Gly	Asp
			50						55					60
Lys	Asp	Leu	Asp	Gly	Gln	Leu	Asp	Phe	Glu	Glu	Phe	Val	His	Tyr
			65						70					75
Leu	Gln	Asp	His	Glu	Lys	Lys	Leu	Arg	Leu	Val	Phe	Lys	Ile	Leu
			80						85					90

Asp	Lys	Lys	Asn	Asp 95	Gly	Arg	Ile	Asp	Ala 100	Gln	Glu	Ile	Met	Gln 105
Ser	Leu	Arg	Asp	Leu 110	Gly	Val	Lys	Ile	Ser 115	Glu	Gln	Gln	Ala	Glu 120
Lys	Ile	Leu	Lys	Ser 125	Met	Asp	Lys	Asn	Gly 130	Thr	Met	Thr	Ile	Asp 135
Trp	Asn	Glu	Trp	Arg 140	Asp	Tyr	His	Leu	Leu 145	His	Pro	Val	Glu	Asn 150
Ile	Pro	Glu	Ile	Ile 155	Leu	Tyr	Trp	Lys	His 160	Ser	Thr	Ile	Phe	Asp 165
Val	Gly	Glu	Asn	Leu 170	Thr	Val	Pro	Asp	Glu 175	Phe	Thr	Val	Glu	Glu 180
Arg	Gln	Thr	Gly	Met 185	Trp	Trp	Arg	His	Leu 190	Val	Ala	Gly	Gly	Gly 195
Ala	Gly	Ala	Val	Ser 200	Arg	Thr	Cys	Thr	Ala 205	Pro	Leu	Asp	Arg	Leu 210
Lys	Val	Leu	Met	Gln 215	Val	His	Ala	Ser	Arg 220	Ser	Asn	Asn	Met	Gly 225
Ile	Val	Gly	Gly	Phe 230	Thr	Gln	Met	Ile	Arg 235	Glu	Gly	Gly	Ala	Arg 240
Ser	Leu	Trp	Arg	Gly 245	Asn	Gly	Ile	Asn	Val 250	Leu	Lys	Ile	Ala	Pro 255
Glu	Ser	Ala	Ile	Lys 260	Phe	Met	Ala	Tyr	Glu 265	Gln	Ile	Lys	Arg	Leu 270
Val	Gly	Ser	Asp	Gln 275	Glu	Thr	Leu	Arg	Ile 280	His	Glu	Arg	Leu	Val 285
Ala	Gly	Ser	Leu	Ala 290	Gly	Ala	Ile	Ala	Gln 295	Ser	Ser	Ile	Tyr	Pro 300
Met	Glu	Val	Leu	Lys 305	Thr	Arg	Met	Ala	Leu 310	Arg	Lys	Thr	Gly	Gln 315
Tyr	Ser	Gly	Met	Leu 320	Asp	Cys	Ala	Arg	Arg 325	Ile	Leu	Ala	Arg	Glu 330
Gly	Val	Ala	Ala	Phe 335	Tyr	Lys	Gly	Tyr	Val 340	Pro	Asn	Met	Leu	Gly 345
Ile	Ile	Pro	Tyr	Ala 350	Gly	Ile	Asp	Leu	Ala 355	Val	Tyr	Glu	Thr	Leu 360
Lys	Asn	Ala	Trp	Leu 365	Gln	His	Tyr	Ala	Val 370	Asn	Ser	Ala	Asp	Pro 375
Gly	Val	Phe	Val	Leu 380	Leu	Ala	Cys	Gly	Thr 385	Met	Ser	Ser	Thr	Cys 390
Gly	Gln	Leu	Ala	Ser 395	Tyr	Pro	Leu	Ala	Leu 400	Val	Arg	Thr	Arg	Met 405

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser
				410					415					420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu
				425					430					435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val
				440					445					450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly
				455					460					465

Val Gln Ser Arg

<210> 290  
 <211> 1658  
 <212> DNA  
 <213> Homo sapiens

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 atttcaggga gacactccat cacagtcact actgtcgcct cagctgggaa 200  
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250  
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 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatggt 350  
 cagaggccgg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400  
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 agaccttgcg gtgtgaggct ccccgatggt tccccagcc cacagtgggtc 600  
 tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 650  
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 ctaaaataat gtgccttggc cacaaaaaag catgcaaagt cattgttaca 950  
 acagggatct acagaactat ttcaccacca gatatgacct agttttatat 1000  
 ttctgggagg aatgaattc atatctagaa gtctggagtg agcaaacaag 1050

agcaagaaac aaaaagaagc caaaagcaga aggctccaat atgaacaaga 1100  
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 actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200  
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 aggacaggat agtgcattgtt ctttgtctct gaatttttag ttatatgtgc 1300  
 tgtaatgttg ctctgaggaa gcccttgaa agtctatccc aacatatcca 1350  
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 aattgactgc cacttcgcaa ctgagggcg gctgcatttt agtaatgggt 1450  
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 ccaactgaca aatgccaaag ttgagaaaaa tgatcataat tttagcataa 1550  
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 aaaaaaaaa 1658

<210> 291  
 <211> 282  
 <212> PRT  
 <213> Homo sapiens

<400> 291  
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 20 25 30  
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala  
 35 40 45  
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro  
 50 55 60  
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly  
 65 70 75  
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu  
 80 85 90  
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala  
 95 100 105  
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val  
 110 115 120  
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser  
 125 130 135  
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe  
 140 145 150  
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr



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Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val	Val		
	170	175	180		
Trp Ala Ser Gln	Val Asp Gln Gly Ala	Asn Phe Ser Glu Val	Ser		
	185	190	195		
Asn Thr Ser Phe	Glu Leu Asn Ser Glu	Asn Val Thr Met Lys	Val		
	200	205	210		
Val Ser Val Leu	Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser	Cys		
	215	220	225		
Met Ile Glu Asn	Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys	Val		
	230	235	240		
Thr Glu Ser Glu	Ile Lys Arg Arg Ser	His Leu Gln Leu Leu	Asn		
	245	250	255		
Ser Lys Ala Ser	Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser	Trp		
	260	265	270		
Ala Leu Leu Pro	Leu Ser Pro Tyr Leu	Met Leu Lys			
	275	280			

<210> 292  
 <211> 1484  
 <212> DNA  
 <213> Homo sapiens

<400> 292  
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 aatttcactc tgcatacaaa gctcagttag taagaccagc gggcaacagt 750  
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<210> 293  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<400> 293  
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 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu  
 35 40 45  
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro  
 50 55 60  
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu  
 65 70 75  
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu  
 80 85 90  
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp  
 95 100 105  
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln  
 110 115 120  
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro  
 125 130 135  
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro  
 140 145 150

Phe	Pro	Leu	Gln	Leu	Phe	Cys	Phe	Leu	Val	Ala	Ile	Arg	Val	Pro
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Phe	Pro	Trp	Thr	Val	Trp	Arg	Lys	Thr	Glu	Ala	Gly	Val	Trp	Asp
				170					175					180

<210> 294  
 <211> 1164  
 <212> DNA  
 <213> Homo sapiens

<400> 294  
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 cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtggt 200  
 ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcggt 250  
 gctggtatca ctgcagtgt tgttgacagct gtagaatctc tgagctgcgt 300  
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 ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450  
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 aacaccagcg atgccttggg cctccctctg aagaacgtgt ccagcaacgc 600  
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 aagaatgaca ttgagtataa gagtctcgtg ctgaaaggct gttccaacgt 750  
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 aaaaaaaaaa aaaa 1164

<210> 295  
 <211> 237  
 <212> PRT

<213> Homo sapiens

<400> 295

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20 25 30  
Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn  
35 40 45  
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro  
50 55 60  
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser  
65 70 75  
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu  
80 85 90  
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys  
95 100 105  
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser  
110 115 120  
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser  
125 130 135  
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val  
140 145 150  
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu  
155 160 165  
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe  
170 175 180  
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys  
185 190 195  
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro  
200 205 210  
Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu  
215 220 225  
Ala Leu Ala Ser Leu Leu Leu Arg Gly Leu Leu Pro  
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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ccagcccat ggtccccgcc gccggcgcg tgctgtgggt cctgctgctg 150

aatctgggtc cccgggcggc gggggcccaa ggctgaccc agactccgac 200  
cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgcagct 250  
accggagcac cgcccgact ggtcttcccc ggaagacaag gataatccta 300  
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ccgccattaa cgaggaggat ggggtcttcag aagaggggggt tgtgattaat 450  
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<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

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Leu	Gly	Pro	Arg	Ala	Ala	Gly	Ala	Gln	Gly	Leu	Thr	Gln	Thr	Pro
				20					25					30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35					40					45
Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50					55					60
Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp

65					70					75				
Arg	Leu	Ala	Gly	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val
				80					85					90
Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly
				95					100					105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr
				110					115					120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser
				125					130					135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu
				140					145					150
Thr	Ser	Ser	Leu	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu
				155					160					165
Pro	Gly	Ser	Gln	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser
				170					175					180
Thr	Pro	Ser	Arg	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser
				185					190					195
Pro	Glu	Asp	Leu	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His
				200					205					210
Cys	His	Cys	Lys	Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys
				215					220					225
Leu	His	Gly	Leu	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln
				230					235					240
Leu	Arg	Thr	Glu	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys
				245					250					255
Asn	Arg	Leu	Arg	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr
				260					265					270
Asp	Thr	Asn	Cys	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr
				275					280					285
Thr	Thr	Pro	Phe	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu
				290					295					300
Pro	Pro	Ala	Ser	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val
				305					310					315
Arg	Ile	Gly	Leu	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe
				320					325					330
Thr	Glu	Met	Gln	Pro	Ile	Asp	Arg	Asn	Gln	Arg				
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<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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 atgagtctag caggctggac ctgtcgggac gactgtaagt atgagtgtat 250  
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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

Met	Ala	Gly	Leu	Ala	Ala	Arg	Leu	Val	Leu	Leu	Ala	Gly	Ala	Ala	1	5	10	15
Ala	Leu	Ala	Ser	Gly	Ser	Gln	Gly	Asp	Arg	Glu	Pro	Val	Tyr	Arg	20	25	30	
Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala	35	40	45	
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala	50	55	60	
Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val	65	70	75	



Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe	
				80					85					90	
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro	
				95					100					105	
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val	
				110					115					120	
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met	
				125					130					135	
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp	
				140					145					150	
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu	
				155					160					165	
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile	
				170					175					180	
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val	
				185					190					195	
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His	
				200					205					210	
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu	
				215					220					225	
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu	
				230					235					240	
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys	
				245					250					255	
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu	
				260					265					270	
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala	
				275					280					285	
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser	
				290					295					300	
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp	
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Lys	Phe	Lys	Leu	Asp											
				320											

<210> 300  
 <211> 1674  
 <212> DNA  
 <213> Homo sapiens

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<210> 301

<211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
Met	Leu	Leu	Gly	Leu	Leu	Met	Ala	Ala	Cys	Phe	Thr	Phe	Cys	Leu	20	25	30	
Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

	290		295		300
Pro Tyr Ala Gln	Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln	Val		
	305		310		315
Leu Arg Thr Leu	Val Gln Glu Lys Gly	Thr Glu Val Leu Ala	Val		
	320		325		330
Arg Val Val Thr	Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met	Phe		
	335		340		345
Ala Glu Glu Glu	Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu	Lys		
	350		355		360
Leu Gln Gln Tyr	Arg Gln Val His Leu	Leu Pro Gly Leu Trp	Glu		
	365		370		375
Gln Gly Trp Cys	Glu Ile Thr Ala His	Leu Leu Ala Leu Pro	Glu		
	380		385		390
His Asp Ala Arg	Glu Lys Val Leu Gln	Thr Leu Gly Val Leu	Leu		
	395		400		405
Thr Thr Cys Arg	Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly	Arg		
	410		415		420
Thr Leu Ala Ser	Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser	Leu		
	425		430		435
Glu Leu Gln Asp	Gly Glu Asp Glu Gly	Tyr Phe Gln Glu Leu	Leu		
	440		445		450
Gly Ser Val Asn	Ser Leu Leu Lys Glu	Leu Arg			
	455		460		

<210> 302  
 <211> 2136  
 <212> DNA  
 <213> Homo sapiens

<400> 302  
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 ccccccttc cccttccccg ggggtctggg gtgacattgc accgcgcccc 100  
 tcgtggggtc gcgttgccac cccacgcgga ctcccagct ggcgcgcccc 150  
 tcccatattgc ctgtcctggt caggccccca ccccccttc cacctgacca 200  
 gccatggggg ctgcggtggt tttcggotgc actttcgtcg cgttcggccc 250  
 ggccttcgcg cttttcttga tcaactgtggc tggggaccg cttcgcgtta 300  
 tcatcctggt cgcaggggca tttttctggc tgggtctcct gtcctggcc 350  
 tctgtggtct gggtcatctt ggtccatgtg accgaccggt cagatgcccg 400  
 gctccagtac ggctcctga tttttggtgc tgctgtctct gtccttctac 450  
 aggaggtgtt ccgctttgcc tactacaagc tgcttaagaa ggcagatgaa 500  
 gggttagcat cgctgagtga ggacggaaga tcacccatct ccatccgcca 550

gatggcctat gtttctggtc tctccttogg tatcatcagt ggtgtcttct 600  
ctgttatcaa tattttggct gatgcacttg ggccagggtg ggttgggac 650  
catggagact caccctatta cttcctgact tcagcctttc tgacagcagc 700  
cattatcctg ctccatacct tttggggagt tgtgttcttt gatgcctgtg 750  
agaggagacg gtactgggct ttgggcctgg tggttgggag tcacctactg 800  
acatcgggac tgacattcct gaacccttg tatgaggcca gcctgctgcc 850  
catctatgca gtcactgttt ccatggggct ctgggccttc atcacagctg 900  
gagggtcctt ccgaagtatt cagcgcagcc tcttgtgtaa ggactgacta 950  
cctggactga tcgcctgaca gatccacact gcctgtccac tgcccatgac 1000  
tgagcccagc cccagcccgg gtccattgcc cacattctct gtctccttct 1050  
cgtcgggtcta cccactacc tccagggttt tgctttgtcc ttttgtgacc 1100  
gttagtctct aagctttacc aggagcagcc tgggttcagc cagtcagtga 1150  
ctggtgggtt tgaatctgca cttatcccca ccacctggg acccccttgt 1200  
tgtgtccagg actccccctg tgtcagtgtc ctgctctcac cctgcccag 1250  
actcacctcc cttccccctc gcaggccgac ggcaggagga cagtcgggtg 1300  
atggtgtatt ctgccctgcg catcccaccc gaggactgag ggaacctagg 1350  
ggggacccct gggcctgggg tgccctcctg atgtcctcgc cctgtatttc 1400  
tccatctcca gttctggaca gtgcagggtg ccaagaaaag ggacctagt 1450  
tagccattgc cctggagatg aaattaatgg aggctcaagg atagatgagc 1500  
totgagtttc tcagtactcc ctcaagactg gacatcttgg tctttttctc 1550  
aggcctgagg gggaaccatt tttggtgtga taaataccct aaactgcctt 1600  
tttttctttt ttgaggtggg gggagggagg aggtatattg gaactcttct 1650  
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aagtgcattg ttgggaactg gcattactgg aactaatggt tttaacctcc 1800  
ttaaccacca gcatccctcc tctccccaag gtgaagtgga gggtgctgtg 1850  
gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900  
atgacatcgt agggaaggag gggagatttt tttgtagttt ttaattgggg 1950  
tgtgggaggg gcggggaggt tttctataaa ctgtatcatt ttctgctgag 2000  
ggtggagtgt cccatccttt taatcaagggt gattgtgatt ttgactaata 2050  
aaaaagaatt tgtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303  
 <211> 247  
 <212> PRT  
 <213> Homo sapiens

<400> 303

Met	Gly	Ala	Ala	Val	Phe	Phe	Gly	Cys	Thr	Phe	Val	Ala	Phe	Gly	
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Pro	Ala	Phe	Ala	Leu	Phe	Leu	Ile	Thr	Val	Ala	Gly	Asp	Pro	Leu	
				20					25					30	
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	
				35					40					45	
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr	
				50					55					60	
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly	
				65					70					75	
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr	
				80					85					90	
Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	
				95					100					105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	
				110					115					120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	
				125					130					135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	
				140					145					150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	
				155					160					165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	
				170					175					180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	
				185					190					195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	
				200					205					210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	
				215					220					225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	
				230					235					240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp									
				245											

<210> 304  
 <211> 240  
 <212> DNA  
 <213> Homo sapiens

<220>

<221> unsure  
<222> 108, 123, 126, 154, 198, 206, 217  
<223> unknown base

<400> 304  
aagctggttt aaggaagcag aggagggtta gattcgttga gtgaggacgg 50  
aagatcaacc catttccatt ccgccagatg gcctatgttt ctggtctctc 100  
ccttcggnat catcagtggg gtnttntctg ttatcaatat tttggctgat 150  
gcanttgggc caggtgtggg tgggatccat ggagactcac cctattantt 200  
cctganttca gccttntga cagcagccat tctcctgctc 240

<210> 305  
<211> 378  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332  
<223> unknown base

<400> 305  
gaccgaccgt tcagatgccc ggttccagta cggcttcctg atttttggtg 50  
ctgctgtntc tgtccttcta caggagggtg tccgctttgc ctantacaag 100  
ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150  
atcaccatt tccatccgcc agatggccta tgttnttggg ntttccttcg 200  
gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250  
gggccagggtg tgggtgggat ccatggagan tcaccctatt aattcctgaa 300  
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350  
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306  
<211> 655  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1, 22, 129, 133, 184  
<223> unknown base

<400> 306  
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt ttccccctt 50  
tccctttccc cgggggtctgg ggtgacattg cacgggcccc tcgtggggtc 100  
gcgttgccac ccacgcgga cccccagnt ggngcgccct tcccatttgc 150  
ctgtcctggg caggccccca ccccccttcc cacntgacca gccatggggg 200  
ctgcggtggt tttcggtctg actttcgtcg cgttcggccc ggccttcgcg 250

cttttcttga tcaactgtggc tggggacccg cttcgcgtta tcatcctggg 300  
 cgcaggggca tttttctggc tgggtccct gctcctggcc tctgtggtct 350  
 ggttcattctt ggtccatgtg accgaccggc cagatgcccg gctccagtac 400  
 ggcctcctga tttttggtgc tgcgtgtctt gtccttctac aggaggtgtt 450  
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggtttagcat 500  
 cgctgagtga ggacggaaga tcacctatct ccatccgcca gatggcctat 550  
 gtttctggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600  
 tattttggct gatgcacttg ggccaggtgt ggttgggatc catggagact 650  
 ccccc 655

<210> 307  
 <211> 650  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 52, 89, 128  
 <223> unknown base

<400> 307  
 gtaaaagaaa gtggccggac cttcattggg gtttcgggtc ccccccttcc 50  
 cnttccccgg ggtctggggg tgacattgca ccgcgccct cgtggggctc 100  
 cgttgccacc ccacgccggc tccccagntg gcgcgccct cccatttgcc 150  
 tgcctggtc agggcccccac cccccctccc acctgaccag ccatgggggc 200  
 tgcggtgttt ttggggctgc actttcgtcg cgttcgggcc cggccttcgc 250  
 gcttttcttg atcaactgtg ctggggaccc gcttcgcgtt atcatcctgg 300  
 tcgcaggggc atttttctgg ctgggtctcc tgctcctggc ctctgtggtc 350  
 tggttcatct tgggtccatg gaaccgaccg tcagatgcc ggctccagta 400  
 cggcctcctg atttttggtg ctgctgtctc tgccttcta caggaggtgt 450  
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500  
 tcgctgagtg aggacggaag atcacccatc tccatccgcc agatggccta 550  
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctc tctgttatca 600  
 atattttggc tgatgcactt gggccaggtg tggttgggat ccatggagac 650

<210> 308  
 <211> 1570  
 <212> DNA  
 <213> Homo sapiens

<400> 308  
 gccccagga gcagtgggtg gttataactc agggccgggtg cccagagccc 50



aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggctga 100  
 gctgggagca aatccccac cccctacctg ggggacagg caagtgagac 150  
 ctggtgaggg tggctcagca ggcagggaag gagaggtgtc tgtgcgtcct 200  
 gcaccacat ctttctctgt cccctccttg ccctgtctgg aggtgctag 250  
 actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgccgat 300  
 ggtggcccg ccttgtggtt cctctctacc tggggaaata aggtgcagcg 350  
 gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400  
 cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450  
 tttcctgtga ccaccctct aacaccgtgc cctctgggag caaccaggac 500  
 ctgggagctg gggccggga agacgcccg tcggatgaca gcagcagccg 550  
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600  
 cgctgttgct aaggcccaac cagctctact gcggggcggt gttggtgcat 650  
 ccacagtggc tgctcacggc cgccactgc aggaagaaag ttttcagagt 700  
 ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750  
 tgttccaggg ggtcaaacc atccccacc ctggctactc ccaccctggc 800  
 cactctaacg acctcatgct catcaaactg aacagaagaa ttcgtccac 850  
 taaagatgtc agaccatca acgtctctc tcattgtccc tctgctggga 900  
 caaagtgctt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950  
 ttccctaagg tctccagtg cttgaatata agcgtgctaa gtcagaaaag 1000  
 gtgcgaggat gcttaccga gacagataga tgacaccatg ttctgcgccg 1050  
 gtgacaaagc aggtagagac tcctgccagg gtgattctgg ggggcctgtg 1100  
 gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150  
 tgcccgcccc aacagaccgg gtgtctacac gaacctctgc aagttcacca 1200  
 agtggatcca ggaaaccatc caggccaact cctgagtcac ccaggactc 1250  
 agcacaccgg catccccacc tgctgcagg acagccctga cactccttc 1300  
 agaccctcat tccttcccag agatgttgag aatgttcac tctccagccc 1350  
 ctgaccccat gtctcctgga ctcagggtct gcttcccca cattgggctg 1400  
 accgtgtctc tctagttgaa ccctgggaac aatttccaaa actgtccagg 1450  
 gcggggggtg cgtctcaatc tccctggggc actttcatcc tcaagctcag 1500  
 ggcccatccc ttctctgcag ctctgacca aatttagtcc cagaaataaa 1550  
 ctgagaagtg gaaaaaaaaa 1570

<210> 309

<211> 293  
 <212> PRT  
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu	
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Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn	
			20						25					30	
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly	
			35						40					45	
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser	
			50						55					60	
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met	
			65						70					75	
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln	
			80						85					90	
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr	
			95						100					105	
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His	
			110						115					120	
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln	
			125						130					135	
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His	
			140						145					150	
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro	
			155						160					165	
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser	
			170						175					180	
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser	
			185						190					195	
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser	
			200						205					210	
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile	
			215						220					225	
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser	
			230						235					240	
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu	
			245						250					255	
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn	
			260						265					270	
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile	
			275						280					285	
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser								

<210> 310  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 310  
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<210> 311  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 311  
 ctggaacatc tgctgcccag attc 24

<210> 312  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 312  
 gtcggatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313  
 <211> 3010  
 <212> DNA  
 <213> Homo sapiens

<400> 313  
 atggtcaacg accggtggaa gaccatgggc ggcgctgccc aacttgagga 50  
 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100  
 ccgtgctgct ggccctggct gtgctgctgg ctgtagctgt caccggtgcc 150  
 gtgctcttcc tgaaccacgc ccacgcgcgc ggcacggcgc cccacactgt 200  
 cgtcagcaact ggggctgcca gcgccaacag cgccctggtc actgtggaaa 250  
 gggcggacag ctgcacctc agcatcctca ttgaccgcgc ctgccccgac 300  
 ctcaccgaca gcttcgcacg cctggagagc gccaggcct cgggtgctgca 350  
 ggcgctgaca gagcaccagg ccagccacg gctggtgggc gaccaggagc 400  
 aggagctgct ggacacgctg gccgaccagc tgccccggct gctggcccga 450  
 gcctcagagc tgcagacgga gtgcatgggg ctgcggaagg ggcatggcac 500  
 gctgggccag ggcctcagcg ccctgcagag tgagcagggc cgcctcatcc 550

agctttctctc tgagagccag ggcacatgg ctcacctggt gaactccgtc 600  
 agcgacatcc tggatgccct gcagagggaac cgggggctgg gccggccccg 650  
 caacaaggcc gaccttcaga gagcgctgc ccggggaacc cggccccggg 700  
 gctgtgccac tggctcccgg ccccgagact gtctggacgt cctcctaagc 750  
 ggacagcagg acgatggcgt ctactctgtc tttcccaccc actaccggc 800  
 cggcttcacg gtgtactgtg acatgcgcac ggacggcggc ggctggacgg 850  
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 gcgtaccgag acggcttttg caggctcacc ggggagcact ggctagggct 950  
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 acctggagga ctttgagaat ggcacggcct atgcccgcta cgggagcttc 1050  
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 gcatgagggt caccaccaag gaccgtgaca gcgaccattc agagaacaac 1200  
 tgtgccgcct tctaccggcg tgcctggtgg taccgcaact gccacacgtc 1250  
 caacctcaat gggcagtagc tgcgcggtgc gcacgcctcc tatgccgacg 1300  
 gcgtggagtg gtccctctgg accggctggc agtactcact caagttctct 1350  
 gagatgaaga tccggccggt ccgggaggac cgctagactg gtgcaccttg 1400  
 tccttgcccc tgctggtccc tgtcgcccca tccccgaccc cacctcactc 1450  
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 agggaggggc cgggccatcc ctgacacgaa gctccctggg ccggtgaagt 1550  
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 tgggtggagtc tgccccaggc accctctgcc ctgcccggcc aaatacccg 1750  
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 agagaacca cctctcccc aagggcctca gcctggctgt gggctgggtg 1950  
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 gtttgtgctt aaaaaacaat aaatttgact tggcaccact gggggtttgt 2950  
 gggagaggcc gtgtgacctg gctctctgtc ccagtgccac caggtcatcc 3000  
 acatgcgcag 3010

<210> 314  
 <211> 461  
 <212> PRT  
 <213> Homo sapiens

<400> 314  
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu  
 1 5 10 15  
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr  
 20 25 30  
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val  
 35 40 45  
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro  
 50 55 60  
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala  
 65 70 75  
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu  
 80 85 90  
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe  
 95 100 105

Ala	Arg	Leu	Glu	Ser	Ala	Gln	Ala	Ser	Val	Leu	Gln	Ala	Leu	Thr	110	115	120
Glu	His	Gln	Ala	Gln	Pro	Arg	Leu	Val	Gly	Asp	Gln	Glu	Gln	Glu	125	130	135
Leu	Leu	Asp	Thr	Leu	Ala	Asp	Gln	Leu	Pro	Arg	Leu	Leu	Ala	Arg	140	145	150
Ala	Ser	Glu	Leu	Gln	Thr	Glu	Cys	Met	Gly	Leu	Arg	Lys	Gly	His	155	160	165
Gly	Thr	Leu	Gly	Gln	Gly	Leu	Ser	Ala	Leu	Gln	Ser	Glu	Gln	Gly	170	175	180
Arg	Leu	Ile	Gln	Leu	Leu	Ser	Glu	Ser	Gln	Gly	His	Met	Ala	His	185	190	195
Leu	Val	Asn	Ser	Val	Ser	Asp	Ile	Leu	Asp	Ala	Leu	Gln	Arg	Asp	200	205	210
Arg	Gly	Leu	Gly	Arg	Pro	Arg	Asn	Lys	Ala	Asp	Leu	Gln	Arg	Ala	215	220	225
Pro	Ala	Arg	Gly	Thr	Arg	Pro	Arg	Gly	Cys	Ala	Thr	Gly	Ser	Arg	230	235	240
Pro	Arg	Asp	Cys	Leu	Asp	Val	Leu	Leu	Ser	Gly	Gln	Gln	Asp	Asp	245	250	255
Gly	Val	Tyr	Ser	Val	Phe	Pro	Thr	His	Tyr	Pro	Ala	Gly	Phe	Gln	260	265	270
Val	Tyr	Cys	Asp	Met	Arg	Thr	Asp	Gly	Gly	Gly	Trp	Thr	Val	Phe	275	280	285
Gln	Arg	Arg	Glu	Asp	Gly	Ser	Val	Asn	Phe	Phe	Arg	Gly	Trp	Asp	290	295	300
Ala	Tyr	Arg	Asp	Gly	Phe	Gly	Arg	Leu	Thr	Gly	Glu	His	Trp	Leu	305	310	315
Gly	Leu	Lys	Arg	Ile	His	Ala	Leu	Thr	Thr	Gln	Ala	Ala	Tyr	Glu	320	325	330
Leu	His	Val	Asp	Leu	Glu	Asp	Phe	Glu	Asn	Gly	Thr	Ala	Tyr	Ala	335	340	345
Arg	Tyr	Gly	Ser	Phe	Gly	Val	Gly	Leu	Phe	Ser	Val	Asp	Pro	Glu	350	355	360
Glu	Asp	Gly	Tyr	Pro	Leu	Thr	Val	Ala	Asp	Tyr	Ser	Gly	Thr	Ala	365	370	375
Gly	Asp	Ser	Leu	Leu	Lys	His	Ser	Gly	Met	Arg	Phe	Thr	Thr	Lys	380	385	390
Asp	Arg	Asp	Ser	Asp	His	Ser	Glu	Asn	Asn	Cys	Ala	Ala	Phe	Tyr	395	400	405
Arg	Gly	Ala	Trp	Trp	Tyr	Arg	Asn	Cys	His	Thr	Ser	Asn	Leu	Asn	410	415	420

Gly	Gln	Tyr	Leu	Arg	Gly	Ala	His	Ala	Ser	Tyr	Ala	Asp	Gly	Val
				425					430					435
Glu	Trp	Ser	Ser	Trp	Thr	Gly	Trp	Gln	Tyr	Ser	Leu	Lys	Phe	Ser
				440					445					450
Glu	Met	Lys	Ile	Arg	Pro	Val	Arg	Glu	Asp	Arg				
				455					460					

<210> 315  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 315  
 cacacgtcca acctcaatgg gcag 24

<210> 316  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 316  
 gaccagcagg gccaaaggaca agg 23

<210> 317  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 317  
 gttctctgag atgaagatcc ggccgggtccg ggagtaccgc ttag 44

<210> 318  
 <211> 1841  
 <212> DNA  
 <213> Homo sapiens

<400> 318  
 gcagtcagag acttcccctg cccctcgctg ggaaagaaca ttaggaatgc 50  
 ctttttagtg cttgcttctt gaactagctc acagtagccc ggcggcccag 100  
 ggcaatccga ccacatttca ctctcaccgc tgtaggaatc cagatgcagg 150  
 ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200  
 atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250  
 gcgcacagag cacagggctc cctcttcaac gtggcgacca gtggccctga 300  
 ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350  
 cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacaccat 400

ttctcaaag gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450  
 ttcaagtcca gaatataaag cttgcaggaa gtctgcagca tgtggctgaa 500  
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550  
 ttgtacagaa caatggaaat ggcattggaga caattgctac cagttctata 600  
 aagacagcaa aagttgggag gactgtaaatt atttctgcct tagtgaaaac 650  
 totaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700  
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgcgcc 750  
 ctgacagtgg caaggcctgg ctgtggatgg atggaacccc tttcacttct 800  
 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850  
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900  
 agcgttgtgt ctgtgagaga agggcaggaa tggatgaagcc agagagcctc 950  
 catgtccccc ctgaaacatt aggggaaggt gactgattcg ccctctgcaa 1000  
 ctacaaatag cagagtgagc caggcgggtgc caaagcaagg gctagttgag 1050  
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtac 1100  
 aaaatgggtt ctggtgtttc ctgttcagga tcaccagcat ttctgagctt 1150  
 ggggtttatgc acgtatttaa cagtcacaag aagtcttatt tacatgccac 1200  
 caaccaacct cagaaaccca taatgtcatc tgccttcttg gcttagagat 1250  
 aacttttagc tctctttctt ctcaatgtct aatatcacct ccctgttttc 1300  
 atgtcttctt tacacttggt ggaataagaa actttttgaa gtagaggaaa 1350  
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400  
 ttggcagtc cttccagat tgtaccagca aatacacaag gaattctttt 1450  
 tgtttgtttc agttcact actcccttcc caatocatca gtaaagaccc 1500  
 catctgcctt gtccatgccg tttcccaaca gggatgtcac ttgatatgag 1550  
 aatctcaaat ctcaatgcct tataagcatt ccttcctgtg tccattaaga 1600  
 ctctgataat tgtctcccct ccataggaat ttctcccagg aaagaaatat 1650  
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 gagagattaa agaccagaaa aaagtgagcc tcttcattctg cacctgtaat 1750  
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 actgaagatt taataataat aaatgtaaact actgtgaaaa a 1841

<210> 319  
 <211> 280  
 <212> PRT  
 <213> Homo sapiens



<400> 319

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Gly Asp Thr Thr Met Ser Leu His Ser Gln Ala Ser Ala Thr Thr  
20 25 30  
Arg His Pro Glu Pro Arg Arg Thr Glu His Arg Ala Pro Ser Ser  
35 40 45  
Thr Trp Arg Pro Val Ala Leu Thr Leu Leu Thr Leu Cys Leu Val  
50 55 60  
Leu Leu Ile Gly Leu Ala Ala Leu Gly Leu Leu Phe Phe Gln Tyr  
65 70 75  
Tyr Gln Leu Ser Asn Thr Gly Gln Asp Thr Ile Ser Gln Met Glu  
80 85 90  
Glu Arg Leu Gly Asn Thr Ser Gln Glu Leu Gln Ser Leu Gln Val  
95 100 105  
Gln Asn Ile Lys Leu Ala Gly Ser Leu Gln His Val Ala Glu Lys  
110 115 120  
Leu Cys Arg Glu Leu Tyr Asn Lys Ala Gly Ala His Arg Cys Ser  
125 130 135  
Pro Cys Thr Glu Gln Trp Lys Trp His Gly Asp Asn Cys Tyr Gln  
140 145 150  
Phe Tyr Lys Asp Ser Lys Ser Trp Glu Asp Cys Lys Tyr Phe Cys  
155 160 165  
Leu Ser Glu Asn Ser Thr Met Leu Lys Ile Asn Lys Gln Glu Asp  
170 175 180  
Leu Glu Phe Ala Ala Ser Gln Ser Tyr Ser Glu Phe Phe Tyr Ser  
185 190 195  
Tyr Trp Thr Gly Leu Leu Arg Pro Asp Ser Gly Lys Ala Trp Leu  
200 205 210  
Trp Met Asp Gly Thr Pro Phe Thr Ser Glu Leu Phe His Ile Ile  
215 220 225  
Ile Asp Val Thr Ser Pro Arg Ser Arg Asp Cys Val Ala Ile Leu  
230 235 240  
Asn Gly Met Ile Phe Ser Lys Asp Cys Lys Glu Leu Lys Arg Cys  
245 250 255  
Val Cys Glu Arg Arg Ala Gly Met Val Lys Pro Glu Ser Leu His  
260 265 270  
Val Pro Pro Glu Thr Leu Gly Glu Gly Asp  
275 280

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>  
<221> unsure  
<222> 59, 95, 149, 331, 364, 438, 446  
<223> unknown base

<400> 320  
aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50  
gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100  
cttttgccac aattoggcac ccagagcccc ggcgcacaga gcacagggnt 150  
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200  
gggtgctgctg atagggctgg cagccctggg gcttttgttt tttcagtact 250  
accagctctc caatactggc caagacacca tttctcaaata ggaagaaaga 300  
ttaggaaata cgtcccaaga gttgcaattt nttcaagtcc agaataataa 350  
gcttgacagga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400  
ataacaaaagc tggaggaaact ttgaaggagg gcaaagtntc ctcatntact 450  
atacacacac cacttccc 468

<210> 321  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 321  
atgcaggcca agtacagcag cac 23

<210> 322  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 322  
catgctgacg acttcctgca agc 23

<210> 323  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 323  
ccacacagtc tctgcttctt ggg 23

<210> 324  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 324  
atgctggatg atgatgggga caccacatg agcctgcatt 40

<210> 325  
<211> 2988  
<212> DNA  
<213> Homo sapiens

<400> 325  
gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50  
gaggcgcggc tccggggatt cggctcgggc cgctggctct gctctgcggg 100  
gagggagcgg gcccgccgc gggggccgag cctccggat ccgccccctc 150  
cccgggtcccg cccctcgga gactcctctg gctgctctgg gggttcgccg 200  
gggccgggga cccgcggtcc gggcgccatg cgggcatcgc tgctgctgtc 250  
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ccgccccaac ctggagactc tgagctgccg ccgcgcgga acaccaacgc 400  
ggcgcgccgg cccaactcgg tcgagcccg agcggagcgc gagaagcccg 450  
gggcccggca aggcgcggg gagaattggg agccgcgcgt cttgccctac 500  
caccctgcac agcccggcca ggccgcaaaa aaggccgtca ggaccgccta 550  
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cctctcagac cacgtgccc acgtggggcg tggccgtgaa ccgcacgctg 650  
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cacactgttc ctgctggccg ggccagacac ggtgctcacg cctgacttcc 2100  
tgaaccgctg ccgcatgcat gccatctccg gctggcaggc cttctttccc 2150  
atgcatttcc aagccttcca ccaggtgtg gcccaccac aagggcctgg 2200  
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gagctgagga gggggcatct cccaacttct cccttttgga ccctgccgaa 2950

gctccctgcc ttttaataaac tggccaagtg tggaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met	Arg	Ala	Ser	Leu	Leu	Leu	Ser	Val	Leu	Arg	Pro	Ala	Gly	Pro
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Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser
				20					25					30
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro
				35					40					45
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg
				50					55					60
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly
				65					70					75
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro
				80					85					90
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg
				95					100					105
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu
				110					115					120
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val
				125					130					135
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe
				140					145					150
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val
				155					160					165
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala
				170					175					180
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe
				185					190					195
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala
				200					205					210
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr
				215					220					225
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly
				230					235					240
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu
				245					250					255
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile
				260					265					270

Val	Ser	Ala	Arg	Pro	Asp	Glu	Trp	Leu	Gly	Arg	Cys	Ile	Leu	Asp	275	280	285
Ala	Thr	Gly	Val	Gly	Cys	Thr	Gly	Asp	His	Glu	Gly	Val	His	Tyr	290	295	300
Ser	His	Leu	Glu	Leu	Ser	Pro	Gly	Glu	Pro	Val	Gln	Glu	Gly	Asp	305	310	315
Pro	His	Phe	Arg	Ser	Ala	Leu	Thr	Ala	His	Pro	Val	Arg	Asp	Pro	320	325	330
Val	His	Met	Tyr	Gln	Leu	His	Lys	Ala	Phe	Ala	Arg	Ala	Glu	Leu	335	340	345
Glu	Arg	Thr	Tyr	Gln	Glu	Ile	Gln	Glu	Leu	Gln	Trp	Glu	Ile	Gln	350	355	360
Asn	Thr	Ser	His	Leu	Ala	Val	Asp	Gly	Asp	Arg	Ala	Ala	Ala	Trp	365	370	375
Pro	Val	Gly	Ile	Pro	Ala	Pro	Ser	Arg	Pro	Ala	Ser	Arg	Phe	Glu	380	385	390
Val	Leu	Arg	Trp	Asp	Tyr	Phe	Thr	Glu	Gln	His	Ala	Phe	Ser	Cys	395	400	405
Ala	Asp	Gly	Ser	Pro	Arg	Cys	Pro	Leu	Arg	Gly	Ala	Asp	Arg	Ala	410	415	420
Asp	Val	Ala	Asp	Val	Leu	Gly	Thr	Ala	Leu	Glu	Glu	Leu	Asn	Arg	425	430	435
Arg	Tyr	His	Pro	Ala	Leu	Arg	Leu	Gln	Lys	Gln	Gln	Leu	Val	Asn	440	445	450
Gly	Tyr	Arg	Arg	Phe	Asp	Pro	Ala	Arg	Gly	Met	Glu	Tyr	Thr	Leu	455	460	465
Asp	Leu	Gln	Leu	Glu	Ala	Leu	Thr	Pro	Gln	Gly	Gly	Arg	Arg	Pro	470	475	480
Leu	Thr	Arg	Arg	Val	Gln	Leu	Leu	Arg	Pro	Leu	Ser	Arg	Val	Glu	485	490	495
Ile	Leu	Pro	Val	Pro	Tyr	Val	Thr	Glu	Ala	Ser	Arg	Leu	Thr	Val	500	505	510
Leu	Leu	Pro	Leu	Ala	Ala	Ala	Glu	Arg	Asp	Leu	Ala	Pro	Gly	Phe	515	520	525
Leu	Glu	Ala	Phe	Ala	Thr	Ala	Ala	Leu	Glu	Pro	Gly	Asp	Ala	Ala	530	535	540
Ala	Ala	Leu	Thr	Leu	Leu	Leu	Leu	Tyr	Glu	Pro	Arg	Gln	Ala	Gln	545	550	555
Arg	Val	Ala	His	Ala	Asp	Val	Phe	Ala	Pro	Val	Lys	Ala	His	Val	560	565	570
Ala	Glu	Leu	Glu	Arg	Arg	Phe	Pro	Gly	Ala	Arg	Val	Pro	Trp	Leu	575	580	585

Ser	Val	Gln	Thr	Ala	Ala	Pro	Ser	Pro	Leu	Arg	Leu	Met	Asp	Leu
				590					595					600
Leu	Ser	Lys	Lys	His	Pro	Leu	Asp	Thr	Leu	Phe	Leu	Leu	Ala	Gly
				605					610					615
Pro	Asp	Thr	Val	Leu	Thr	Pro	Asp	Phe	Leu	Asn	Arg	Cys	Arg	Met
				620					625					630
His	Ala	Ile	Ser	Gly	Trp	Gln	Ala	Phe	Phe	Pro	Met	His	Phe	Gln
				635					640					645
Ala	Phe	His	Pro	Gly	Val	Ala	Pro	Pro	Gln	Gly	Pro	Gly	Pro	Pro
				650					655					660
Glu	Leu	Gly	Arg	Asp	Thr	Gly	Arg	Phe	Asp	Arg	Gln	Ala	Ala	Ser
				665					670					675
Glu	Ala	Cys	Phe	Tyr	Asn	Ser	Asp	Tyr	Val	Ala	Ala	Arg	Gly	Arg
				680					685					690
Leu	Ala	Ala	Ala	Ser	Glu	Gln	Glu	Glu	Glu	Leu	Leu	Glu	Ser	Leu
				695					700					705
Asp	Val	Tyr	Glu	Leu	Phe	Leu	His	Phe	Ser	Ser	Leu	His	Val	Leu
				710					715					720
Arg	Ala	Val	Glu	Pro	Ala	Leu	Leu	Gln	Arg	Tyr	Arg	Ala	Gln	Thr
				725					730					735
Cys	Ser	Ala	Arg	Leu	Ser	Glu	Asp	Leu	Tyr	His	Arg	Cys	Leu	Gln
				740					745					750
Ser	Val	Leu	Glu	Gly	Leu	Gly	Ser	Arg	Thr	Gln	Leu	Ala	Met	Leu
				755					760					765
Leu	Phe	Glu	Gln	Glu	Gln	Gly	Asn	Ser	Thr					
				770					775					

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 329  
atggctcagt gtgcagacag 20

<210> 330  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 330  
gcatgctgct ccgtgaagta gtcc 24

<210> 331  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 331  
atgcatggga aagaaggcct gccc 24

<210> 332  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 332  
tgcaactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333  
<211> 1095  
<212> DNA  
<213> Homo sapiens

<400> 333  
gctctggccg gccccggcga ttggtcaccg ccgctaggg gacagccctg 50  
gcctcctctg attggcaagc gctggccacc tccccacacc ctttgcaac 100  
gctcccctag tggagaaaag gagtagctat tagccaattc ggcagggccc 150  
gctttttaga agcttgatit cctttgaaga tgaaagacta gcggaagctc 200  
tgctcttttc ccagtgggc gaggggaactc ggggogattg gctgggaact 250  
gtatccaccc aaatgtcacc gatttcttcc tatgcaggaa atgagcagac 300  
ccatcaataa gaaatttctc agcctggccg aaaatggttg gccccacgaa 350  
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400



aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450  
 gattgtcgcg ctgcacacca ctgcagctgc gcacagtcgc atttctttcc 500  
 ccgcccctga gacctcgcag caccatctgt catggcgggt gggctgtttg 550  
 gtttgagcgc tcgccgtctt ttggcggcag cggcgacgcg agggctcccg 600  
 gccgcccgcg tccgctggga atctagcttc tccaggactg tggtcgcccc 650  
 gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700  
 aggaccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750  
 catggttatg acaaggaccc cgttttggac gtctggaaca tgcgacttgt 800  
 cttcttcttt ggcgtctcca tcatcctggg ccttggcagc acctttgtgg 850  
 cctatctgcc tgactacagg atgaaagagt ggtcccgccg cgaagctgag 900  
 aggcttgtga aataccgaga ggccaatggc cttcccatca tggaatccaa 950  
 ctgcttcgac cccagcaaga tccagctgcc agaggatgag tgaccagttg 1000  
 ctaagtgggg ctcaagaagc accgccttcc ccaccccctg cctgccattc 1050  
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala	1	5	10	15
Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu	20	25	30	
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly	35	40	45	
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu	50	55	60	
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly	65	70	75	
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val	80	85	90	
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe	95	100	105	
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg	110	115	120	
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro	125	130	135	
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro	140	145	150	

Glu Asp Glu

<210> 335  
<211> 442  
<212> DNA  
<213> Homo sapiens

<400> 335  
ggcggctggg ctgtttggtt tgagcgcctg ccgtcttttg gcggcagcgg 50  
cgacgcgagg gctcccggcc gccgcgctcc gctgggaatc tagcttctcc 100  
aggactgtgg tcgccccgtc cgtgtgtggc ggaaagcggc cccagaacc 150  
gaccacaccg tggcaagagg accagaacc cgaggacgaa aacttgtatg 200  
agaagaacct agactcccat gggtatgaca aggaccccg tttggacgtc 250  
tggaacatgc gacttgtctt cttctttggc gtctccatca tcctgttcct 300  
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350  
cccgccgcga agctgagagg cttgtgaaat accgagaggc caatggcctt 400  
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 336  
ctgagaccct gcagacccat ctg 23

<210> 337  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 337  
ggtgcttctt gagccccact tagc 24

<210> 338  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 338  
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339  
<211> 2162  
<212> DNA

<213> Homo sapiens

<400> 339

gcggcgggcta tgcgcgttgc tctgctctgc ctgttgctcc tggggcccgg 50  
cggtcgtgctc cttgcagAAC ccccaCgcga cagcctgcgg gaggaacttg 100  
tcatcacccc gctgccttcc ggggaCgtag ccgccacatt ccagttccgc 150  
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200  
ctttccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250  
tgacactgtc attcacacaa ggcttttgga ggaccgata ctgggggcca 300  
cccttcctgc aggcccatc aggtgcagag ctgtgggtct ggttccaaga 350  
cactgtcact gatgtggata aatcttgga ggagctcagt aatgtcctct 400  
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450  
actcccactg cctccttcaa acccctgggt ctggccaatg aactgacca 500  
ctactttctg cgctatgctg tgcctgcgcg ggaggtggtc tgcaccgaaa 550  
acctacccc ctggaagaag ctcttgccct gtagttccaa ggcaggcctc 600  
tctgtgctgc tgaaggcaga tcgcttgctc cacaccagct accactcca 650  
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cctgggagct gaggcagacc ctgtcagttg tatttgatgc cttcatcacg 750  
gggcagggaa agaaagactg gtccctcttc cggatgttct cccgaaccct 800  
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ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900  
actacatata aggacgtcat cctaggcact cggaagacct atgcatcta 950  
tgacttgctt gacaccgcca tgatcaacaa ctctcgaaac ctcaacatcc 1000  
agctcaagtg gaagagaccc ccagagaatg agggccccc agtgcccttc 1050  
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gagcacactg ctgtacaaca cccaccata ccgggccttc ccggtgctgc 1150  
tgctggacac cgtaccctgg tatctgoggc tgtatgtgca caccctcacc 1200  
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tgccaggac cggtgcaac cccacctct ggagatgctg attcagctgc 1300  
cggccaactc agtcaccaag gtttccatcc agtttgagcg ggcgctgctg 1350  
aagtggaccg agtacacgcc agatcctaac catggcttct atgtcagccc 1400  
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tatccggcgc gcccgagggtg tccccccact ctgattcttg ccctttccag 1750  
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aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900  
gtggcatttg aatttgaatt aacttagaaa ttcatttctt cacctgtagt 1950  
ggccacctct atattgaggt gctcaataag caaaagtggc cgggtggctgc 2000  
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050  
ggcagcactg gccaaagtgat tgggggtgtgc tacacagtgt atgtcactgt 2100  
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150  
aaaaaaaaaa aa 2162

<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Gly	Pro	Gly	Gly	1	5	10	15
Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	Leu	20	25	30
Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	Gln	35	40	45
Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	Ser	50	55	60
His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	Lys	65	70	75
Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	Trp	80	85	90
Arg	Thr	Arg	Tyr	Trp	Gly	Pro	Pro	Phe	Leu	Gln	Ala	Pro	Ser	Gly	95	100	105
Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	Asp	110	115	120
Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	Cys	125	130	135
Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	Thr	140	145	150

Ala	Ser	Phe	Lys	Pro	Leu	Gly	Leu	Ala	Asn	Asp	Thr	Asp	His	Tyr
				155					160					165
Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu	Val	Val	Cys	Thr	Glu
				170					175					180
Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys	Ser	Ser	Lys	Ala
				185					190					195
Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe	His	Thr	Ser
				200					205					210
Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg	Asn	Ala
				215					220					225
Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser	Val
				230					235					240
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser
				245					250					255
Leu	Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu
				260					265					270
Ala	Ser	Glu	Ser	Arg	Val	Tyr	Val	Asp	Ile	Thr	Thr	Tyr	Asn	Gln
				275					280					285
Asp	Asn	Glu	Thr	Leu	Glu	Val	His	Pro	Pro	Pro	Thr	Thr	Thr	Tyr
				290					295					300
Gln	Asp	Val	Ile	Leu	Gly	Thr	Arg	Lys	Thr	Tyr	Ala	Ile	Tyr	Asp
				305					310					315
Leu	Leu	Asp	Thr	Ala	Met	Ile	Asn	Asn	Ser	Arg	Asn	Leu	Asn	Ile
				320					325					330
Gln	Leu	Lys	Trp	Lys	Arg	Pro	Pro	Glu	Asn	Glu	Ala	Pro	Pro	Val
				335					340					345
Pro	Phe	Leu	His	Ala	Gln	Arg	Tyr	Val	Ser	Gly	Tyr	Gly	Leu	Gln
				350					355					360
Lys	Gly	Glu	Leu	Ser	Thr	Leu	Leu	Tyr	Asn	Thr	His	Pro	Tyr	Arg
				365					370					375
Ala	Phe	Pro	Val	Leu	Leu	Leu	Asp	Thr	Val	Pro	Trp	Tyr	Leu	Arg
				380					385					390
Leu	Tyr	Val	His	Thr	Leu	Thr	Ile	Thr	Ser	Lys	Gly	Lys	Glu	Asn
				395					400					405
Lys	Pro	Ser	Tyr	Ile	His	Tyr	Gln	Pro	Ala	Gln	Asp	Arg	Leu	Gln
				410					415					420
Pro	His	Leu	Leu	Glu	Met	Leu	Ile	Gln	Leu	Pro	Ala	Asn	Ser	Val
				425					430					435
Thr	Lys	Val	Ser	Ile	Gln	Phe	Glu	Arg	Ala	Leu	Leu	Lys	Trp	Thr
				440					445					450
Glu	Tyr	Thr	Pro	Asp	Pro	Asn	His	Gly	Phe	Tyr	Val	Ser	Pro	Ser
				455					460					465

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val	
				470					475					480	
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser	
				485					490					495	
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu	
				500					505					510	
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile	
				515					520					525	
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr	
				530					535					540	
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg	Thr	Gly	
				545					550					555	
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly	
				560					565					570	

Val Pro Pro Leu

<210> 341  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 341  
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<210> 342  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic oligonucleotide probe

<400> 342  
 ccaactctga ggagagcaag tggc 24

<210> 343  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 343  
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344  
 <211> 762  
 <212> DNA  
 <213> Homo sapiens

<400> 344  
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 gtttggccag ctgacaacgt acgctgcttc aagtccgac ctccccagt 150  
 tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcact 200  
 gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250  
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300  
 gtgtccaggc tcctcctcta ccagggtgtcc tcagaaatga tgctgggtcc 350  
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 gagacttga atatggaaga agcaataccc aacccacca aagaaaacct 450  
 gagcttgaag tccttttccc caaaaagagg gaagagtcac aaaaagtcca 500  
 gaccccaggg acggtacttt ccctctctac ctggtgctcc tccctaattgc 550  
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600  
 aaagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650  
 gtcagagaag agaaactggt cctcaccaga tgctgaatct gctggtgcct 700  
 tgatcttga cttccagcc tctagaactg taagaaataa atatttgctg 750  
 ttataatcc aa 762

<210> 345  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 345  
 Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu  
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 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys  
 20 25 30  
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp  
 35 40 45  
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys  
 50 55 60  
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys  
 65 70 75  
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro  
 80 85 90  
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser  
 95 100 105  
 Thr Arg Cys Pro Gln Lys  
 110

<210> 346  
<211> 2528  
<212> DNA  
<213> Homo sapiens

<400> 346  
aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtgcac 50  
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gccccaggac atgcagaacc ttctctaga acccgacca ccaccatgag 150  
gtcctgcctg tggagatgca ggcaoctgag ccaaggcgtc cagtggtcct 200  
tgctttctggc tgtcctggtc ttctttctct tcgccttgcc ctcttttatt 250  
aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300  
agaaaggtct ctacagtccc tggcaaagcc taagtcccag gcacccacaa 350  
gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400  
ctcaacacac aaaccagcc caaggcccac accaccggag acagaggaaa 450  
ggaggccaac caggcaccgc cggaggagca ggacaaggtg ccccacacag 500  
cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550  
aactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600  
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gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700  
ggcaaagcgg caaccacagc caagaogctc attcccacaaa gtcagcacag 750  
aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800  
tgaccacagc agtcatocca cctaaggaga agaaacctca ggccacccca 850  
ccccctgcc ctttcagag ccccaogacg cagagaaacc aaagactgaa 900  
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gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000  
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 <213> Homo sapiens

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 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala  
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 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His  
 35 40 45  
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala  
 50 55 60  
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

65					70					75				
Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Leu	Asn	Thr	Gln	Thr
				80					85					90
Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn
				95					100					105
Gln	Ala	Pro	Pro	Glu	Glu	Gln	Asp	Lys	Val	Pro	His	Thr	Ala	Gln
				110					115					120
Arg	Ala	Ala	Trp	Lys	Ser	Pro	Glu	Lys	Glu	Lys	Thr	Met	Val	Asn
				125					130					135
Thr	Leu	Ser	Pro	Arg	Gly	Gln	Asp	Ala	Gly	Met	Ala	Ser	Gly	Arg
				140					145					150
Thr	Glu	Ala	Gln	Ser	Trp	Lys	Ser	Gln	Asp	Thr	Lys	Thr	Thr	Gln
				155					160					165
Gly	Asn	Gly	Gly	Gln	Thr	Arg	Lys	Leu	Thr	Ala	Ser	Arg	Thr	Val
				170					175					180
Ser	Glu	Lys	His	Gln	Gly	Lys	Ala	Ala	Thr	Thr	Ala	Lys	Thr	Leu
				185					190					195
Ile	Pro	Lys	Ser	Gln	His	Arg	Met	Leu	Ala	Pro	Thr	Gly	Ala	Val
				200					205					210
Ser	Thr	Arg	Thr	Arg	Gln	Lys	Gly	Val	Thr	Thr	Ala	Val	Ile	Pro
				215					220					225
Pro	Lys	Glu	Lys	Lys	Pro	Gln	Ala	Thr	Pro	Pro	Pro	Ala	Pro	Phe
				230					235					240
Gln	Ser	Pro	Thr	Thr	Gln	Arg	Asn	Gln	Arg	Leu	Lys	Ala	Ala	Asn
				245					250					255
Phe	Lys	Ser	Glu	Pro	Arg	Trp	Asp	Phe	Glu	Glu	Lys	Tyr	Ser	Phe
				260					265					270
Glu	Ile	Gly	Gly	Leu	Gln	Thr	Thr	Cys	Pro	Asp	Ser	Val	Lys	Ile
				275					280					285
Lys	Ala	Ser	Lys	Ser	Leu	Trp	Leu	Gln	Lys	Leu	Phe	Leu	Pro	Asn
				290					295					300
Leu	Thr	Leu	Phe	Leu	Asp	Ser	Arg	His	Phe	Asn	Gln	Ser	Glu	Trp
				305					310					315
Asp	Arg	Leu	Glu	His	Phe	Ala	Pro	Pro	Phe	Gly	Phe	Met	Glu	Leu
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Asn	Tyr	Ser	Leu	Val	Gln	Lys	Val	Val	Thr	Arg	Phe	Pro	Pro	Val
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Pro	Gln	Gln	Gln	Leu	Leu	Leu	Ala	Ser	Leu	Pro	Ala	Gly	Ser	Leu
				350					355					360
Arg	Cys	Ile	Thr	Cys	Ala	Val	Val	Gly	Asn	Gly	Gly	Ile	Leu	Asn
				365					370					375
Asn	Ser	His	Met	Gly	Gln	Glu	Ile	Asp	Ser	His	Asp	Tyr	Val	Phe

	380		385		390
Arg Leu Ser Gly	Ala Leu Ile Lys Gly	Tyr Glu Gln Asp Val Gly			
	395	400			405
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr Gln			
	410	415			420
Ser Leu Leu Ile	Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu			
	425	430			435
Gly Lys Asp Val	Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp			
	440	445			450
Tyr Glu Trp Leu	Glu Ala Leu Leu Met	Asn Gln Thr Val Met Ser			
	455	460			465
Lys Asn Leu Phe	Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg			
	470	475			480
Glu Ala Leu His	Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe			
	485	490			495
Leu Arg Tyr Met	Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp			
	500	505			510
Gly Ala His Trp	Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu			
	515	520			525
Leu Leu Thr Ala	Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly			
	530	535			540
Phe Ile Thr Glu	Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp			
	545	550			555
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys			
	560	565			570
Leu Glu Arg Glu	Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile			
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Arg Leu Tyr Gln	Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn			
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 accaggagcc atgagaagtg ccttggaac caacaggga acagaactat 350

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 35 40 45  
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His  
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 <211> 1141  
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 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg  
 50 55 60  
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln  
 65 70 75  
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala  
 80 85 90  
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys  
 95 100 105  
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln  
 110 115 120  
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile  
 125 130 135  
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly  
 140 145 150  
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro  
 155 160 165  
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn  
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Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro  
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Gly Ala

<210> 352  
 <211> 3226  
 <212> DNA  
 <213> Homo sapiens

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 tctcttaact gtgtccactc cttcatgggt tcagagcact gaagcatctc 200  
 caaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttcct 250  
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 ccaccagcac catcatcctg catagtcacc acctgcagat atctagggcc 400  
 accctcagga agggagctgg agagaggcta tcggaagaac cctgcagggt 450  
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 ggaactgagg atactagcat caacacaatt tgaaccact gcagctagaa 650  
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 caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050  
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 cttctgcatc aagtaagctt ggcacacag tgactgtggc ccatgaactg 1150  
 gccaccaggt ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200  
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gacgcaatgg aggtagatgc tttaaattcc tcacaccctg tgtctacacc 1350  
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 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050  
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 tcgctaccat gtgttttggt catcacaggt gttgccctgc aacgtaaacc 3150  
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 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

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 <211> 941  
 <212> PRT  
 <213> Homo sapiens

<400> 353  
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 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr  
 35 40 45  
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro  
 50 55 60  
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr  
 65 70 75  
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr  
 80 85 90  
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala  
 95 100 105  
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu  
 110 115 120  
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala  
 125 130 135  
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His  
 140 145 150  
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser  
 155 160 165  
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr  
 170 175 180  
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp  
 185 190 195  
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu  
 200 205 210  
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val



	215		220		225
Thr Val Ala Glu Gly Leu Ile Glu Asp	230	His Phe Asp Val Thr	235	Val	240
Lys Met Ser Thr Tyr Leu Val Ala Phe	245	Ile Ile Ser Asp Phe	250	Glu	255
Ser Val Ser Lys Ile Thr Lys Ser Gly	260	Val Lys Val Ser Val	265	Tyr	270
Ala Val Pro Asp Lys Ile Asn Gln Ala	275	Asp Tyr Ala Leu Asp	280	Ala	285
Ala Val Thr Leu Leu Glu Phe Tyr Glu	290	Asp Tyr Phe Ser Ile	295	Pro	300
Tyr Pro Leu Pro Lys Gln Asp Leu Ala	305	Ala Ile Pro Asp Phe	310	Gln	315
Ser Gly Ala Met Glu Asn Trp Gly Leu	320	Thr Thr Tyr Arg Glu	325	Ser	330
Ala Leu Leu Phe Asp Ala Glu Lys Ser	335	Ser Ala Ser Ser Lys	340	Leu	345
Gly Ile Thr Val Thr Val Ala His Glu	350	Leu Ala His Gln Trp	355	Phe	360
Gly Asn Leu Val Thr Met Glu Trp Trp	365	Asn Asp Leu Trp Leu	370	Asn	375
Glu Gly Phe Ala Lys Phe Met Glu Phe	380	Val Ser Val Ser Val	385	Thr	390
His Pro Glu Leu Lys Val Gly Asp Tyr	395	Phe Phe Gly Lys Cys	400	Phe	405
Asp Ala Met Glu Val Asp Ala Leu Asn	410	Ser Ser His Pro Val	415	Ser	420
Thr Pro Val Glu Asn Pro Ala Gln Ile	425	Arg Glu Met Phe Asp	430	Asp	435
Val Ser Tyr Asp Lys Gly Ala Cys Ile	440	Leu Asn Met Leu Arg	445	Glu	450
Tyr Leu Ser Ala Asp Ala Phe Lys Ser	455	Gly Ile Val Gln Tyr	460	Leu	465
Gln Lys His Ser Tyr Lys Asn Thr Lys	470	Asn Glu Asp Leu Trp	475	Asp	480
Ser Met Ala Ser Ile Cys Pro Thr Asp	485	Gly Val Lys Gly Met	490	Asp	495
Gly Phe Cys Ser Arg Ser Gln His Ser	500	Ser Ser Ser Ser His	505	Trp	510
His Gln Glu Gly Val Asp Val Lys Thr	515	Met Met Asn Thr Trp	520	Thr	525
Leu Gln Arg Gly Phe Pro Leu Ile Thr		Ile Thr Val Arg Gly		Arg	

530										535					540				
Asn	Val	His	Met	Lys	Gln	Glu	His	Tyr	Met	Lys	Gly	Ser	Asp	Gly					
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Ala	Pro	Asp	Thr	Gly	Tyr	Leu	Trp	His	Val	Pro	Leu	Thr	Phe	Ile					
				560					565					570					
Thr	Ser	Lys	Ser	Asn	Met	Val	His	Arg	Phe	Leu	Leu	Lys	Thr	Lys					
				575					580					585					
Thr	Asp	Val	Leu	Ile	Leu	Pro	Glu	Glu	Val	Glu	Trp	Ile	Lys	Phe					
				590					595					600					
Asn	Val	Gly	Met	Asn	Gly	Tyr	Tyr	Ile	Val	His	Tyr	Glu	Asp	Asp					
				605					610					615					
Gly	Trp	Asp	Ser	Leu	Thr	Gly	Leu	Leu	Lys	Gly	Thr	His	Thr	Ala					
				620					625					630					
Val	Ser	Ser	Asn	Asp	Arg	Ala	Ser	Leu	Ile	Asn	Asn	Ala	Phe	Gln					
				635					640					645					
Leu	Val	Ser	Ile	Gly	Lys	Leu	Ser	Ile	Glu	Lys	Ala	Leu	Asp	Leu					
				650					655					660					
Ser	Leu	Tyr	Leu	Lys	His	Glu	Thr	Glu	Ile	Met	Pro	Val	Phe	Gln					
				665					670					675					
Gly	Leu	Asn	Glu	Leu	Ile	Pro	Met	Tyr	Lys	Leu	Met	Glu	Lys	Arg					
				680					685					690					
Asp	Met	Asn	Glu	Val	Glu	Thr	Gln	Phe	Lys	Ala	Phe	Leu	Ile	Arg					
				695					700					705					
Leu	Leu	Arg	Asp	Leu	Ile	Asp	Lys	Gln	Thr	Trp	Thr	Asp	Glu	Gly					
				710					715					720					
Ser	Val	Ser	Glu	Gln	Met	Leu	Arg	Ser	Glu	Leu	Leu	Leu	Leu	Ala					
				725					730					735					
Cys	Val	His	Asn	Tyr	Gln	Pro	Cys	Val	Gln	Arg	Ala	Glu	Gly	Tyr					
				740					745					750					
Phe	Arg	Lys	Trp	Lys	Glu	Ser	Asn	Gly	Asn	Leu	Ser	Leu	Pro	Val					
				755					760					765					
Asp	Val	Thr	Leu	Ala	Val	Phe	Ala	Val	Gly	Ala	Gln	Ser	Thr	Glu					
				770					775					780					
Gly	Trp	Asp	Phe	Leu	Tyr	Ser	Lys	Tyr	Gln	Phe	Ser	Leu	Ser	Ser					
				785					790					795					
Thr	Glu	Lys	Ser	Gln	Ile	Glu	Phe	Ala	Leu	Cys	Arg	Thr	Gln	Asn					
				800					805					810					
Lys	Glu	Lys	Leu	Gln	Trp	Leu	Leu	Asp	Glu	Ser	Phe	Lys	Gly	Asp					
				815					820					825					
Lys	Ile	Lys	Thr	Gln	Glu	Phe	Pro	Gln	Ile	Leu	Thr	Leu	Ile	Gly					
				830					835					840					
Arg	Asn	Pro	Val	Gly	Tyr	Pro	Leu	Ala	Trp	Gln	Phe	Leu	Arg	Lys					

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser	Ser		
	860		865		870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr	Arg		
	875		880		885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys	Glu		
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr	Ile		
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile	Arg		
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Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met			
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 <211> 1587  
 <212> DNA  
 <213> Homo sapiens

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 gttcagcatg tgtggaaggt gtccgacctc ccccggaat ggaccacctaa 150  
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<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

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Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln
				20					25					30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys
				35					40					45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met
				50					55					60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly
				65					70					75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg
				80					85					90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg
				95					100					105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp
				110					115					120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val
				125					130					135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile
				140					145					150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu

	155		160		165
Arg Gly Gly Gly	Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys	Met		
	170	175	180		
Pro Gln Pro Gly	Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile	Gly		
	185	190	195		
Pro Val Gly Met	Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu	Thr		
	200	205	210		
Cys His Arg Gly	Thr Thr Ile Met Thr	His Gly Asn Leu Ala	Gln		
	215	220	225		
Glu Pro Thr Asp	Trp Thr Thr Ser Asn	Thr Glu Met Cys Glu	Val		
	230	235	240		
Gly Gln Val Cys	Gln Glu Thr Leu Leu	Leu Ile Asp Val Gly	Leu		
	245	250	255		
Thr Ser Thr Leu	Val Gly Thr Lys Gly	Cys Ser Thr Val Gly	Ala		
	260	265	270		
Gln Asn Ser Gln	Lys Thr Thr Ile His	Ser Ala Pro Pro Gly	Val		
	275	280	285		
Leu Val Ala Ser	Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys	Asn		
	290	295	300		
Ser Ala Ser Ser	Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro	Gln		
	305	310	315		
Ala Ala Pro Val	Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val	Gln		
	320	325	330		
Pro Leu Gly Thr	Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys	Pro		
	335	340	345		
Arg Gly Ala Thr	His Cys Tyr Asp Gly	Tyr Ile His Leu Ser	Gly		
	350	355	360		
Gly Gly Leu Ser	Thr Lys Met Ser Ile	Gln Gly Cys Val Ala	Gln		
	365	370	375		
Pro Ser Ser Phe	Leu Leu Asn His Thr	Arg Gln Ile Gly Ile	Phe		
	380	385	390		
Ser Ala Arg Glu	Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln	His		
	395	400	405		
Glu Gly Gly Gly	Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly	Val		
	410	415	420		
Gly Leu Ala Leu	Ala Pro Ala Leu Trp	Trp Gly Val Val Cys	Pro		
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Ser Cys

<210> 356  
 <211> 1238  
 <212> DNA  
 <213> Homo sapiens

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tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagcoggct 150  
ggcgatgacg cctgctctgt gcagatcctc gtccctggcc tcaaagggga 200  
tgcgggagag aaggagagaca aaggcgcccc cggacggcct ggaagagtgc 250  
gccccacggg agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300  
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cgcagcgggt agcccacaac tgctacgac gaggaggact gcgtggagat 800  
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ccattggggg ccccatgt cctgcaggg ttggcaggga cagagcccag 950  
accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000  
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aaaatgaaag tgttcctggg gtgctgtctc tgaagaagca gagtttcatt 1100  
acctgtattg tagcccaat gtcattatgt aattattacc cagaattgct 1150  
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tagtgcagta gttaagtcca aaaaaaaaaa aaaaaaaaaa 1238

<210> 357

<211> 271

<212> PRT

<213> Homo sapiens

<400> 357

Met	Arg	Gly	Asn	Leu	Ala	Leu	Val	Gly	Val	Leu	Ile	Ser	Leu	Ala
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Phe	Leu	Ser	Leu	Leu	Pro	Ser	Gly	His	Pro	Gln	Pro	Ala	Gly	Asp
				20				25					30	

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	
				35					40					45	
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	
				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
				125					130					135	
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
				140					145					150	
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
				200					205					210	
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
				215					220					225	
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	
				260					265					270	

Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

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gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200  
 tagctcagag ctttggggct gtctgtaagg agccacagga ggaggtgggt 250  
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300  
 gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350  
 gccaggctag cacagatcct aaggaatcaa catctccoga gaaacgtgac 400  
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450  
 gggaaagaca ggacctttct taccttcagt gagggttcct cggccccctt 500  
 atcccaatca gcttggatcc acaggaaagt ctccctggg aacagaggag 550  
 cagagacctt tataagactc tcctacggat gtgaatcaag agaacgtccc 600  
 cagctttggc atcctcaagt atcccccgag agcagaatag gtactccact 650  
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700  
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 ctagagtccc tgtagtgtcc tacattaaaa atataatgtc tctctctatt 900  
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950  
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359

<211> 135

<212> PRT

<213> Homo sapiens

<400> 359

Met	Arg	Ile	Met	Leu	Leu	Phe	Thr	Ala	Ile	Leu	Ala	Phe	Ser	Leu	1	5	10	15
Ala	Gln	Ser	Phe	Gly	Ala	Val	Cys	Lys	Glu	Pro	Gln	Glu	Glu	Val	20	25	30	
Val	Pro	Gly	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln	35	40	45	
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu	50	55	60	
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr	65	70	75	
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met	80	85	90	
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu	95	100	105	
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly	110	115	120	



Ser	Thr	Gly	Lys	Ser	Ser	Leu	Gly	Thr	Glu	Glu	Gln	Arg	Pro	Leu
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<210> 360  
 <211> 1738  
 <212> DNA  
 <213> Homo sapiens

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 gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcggcc 150  
 agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200  
 ggagtggagc catgagctgc gtccctgggtg gtgtcatccc cttggggctg 250  
 ctgttcctgg tctgcggatc ccaaggctac ctctgccc aactcactct 300  
 cttagaggag ctgctcagca aataccagca caacgagtct cactcccggg 350  
 tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400  
 aacaagcttc ggggccaggt gcagcctcag gcctccaaca tggagtacat 450  
 ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggcctgg 500  
 gccaccagcc tgcctctgtc ccagccagc tctgttcccc agccagtgcg 550  
 tgtgatggct ggctcagggc ctccctctggc aggggaggat cccggctctg 600  
 ttctgttttg tttgtttgtt ttgagacagg gtctcactct gccactgacg 650  
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 gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750  
 accatggtgc ccagctagat tttaaatatt ttgtggagat gggggctctg 800  
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 ctctggctct gttcttaaca ttctgcaaaa acaacacacg tgggttcctt 950  
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 gaacacagct ctcagccttt ccacactgga ggcagagtgg ggagggggcc 1050  
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 accaccctga cttctcctta gcccggtgtg gcctcacttt ccacttgag 1150  
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 cgggaaagga gctaacggtg acagaagaca gccaaagtca accctcccg 1300  
 gtgattgtga tgggtgttcc aggtgtgggt gggcgatgct gctacttgac 1350

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 agaggaatgg accacagtct tccagggtcc ctctcgtcc accaaccggg 1450  
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500  
 cactgccag cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550  
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 actgaggtgg aggtggagggt ggggggtggg agctgaggaa ggaggatcgc 1650  
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 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361  
 <211> 159  
 <212> PRT  
 <213> Homo sapiens

<400> 361  
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe  
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 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu  
 20 25 30  
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser  
 35 40 45  
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu  
 50 55 60  
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser  
 65 70 75  
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp  
 80 85 90  
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser  
 95 100 105  
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val  
 110 115 120  
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val  
 125 130 135  
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln  
 140 145 150  
 Trp His Asn Arg His Ala Leu Lys Pro  
 155

<210> 362  
 <211> 422  
 <212> DNA  
 <213> Homo sapiens

<400> 362  
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ggccactatg ggggtctgggc tgccccttgt cctcctcttg accctccttg 100  
gcagctcaca tggaacaggg ccgggtatga ctttgcaact gaagctgaag 150  
gagtcttttc tgacaaattc ctctatgag tccagcttcc tggaattgct 200  
tgaaaagctc tgccctcctcc tccatctccc ttcagggacc agcgtcacc 250  
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300  
ttgaagcctg tgtccttctt gggccgggct tttgggccgg ggatgcagga 350  
ggcaggcccc gaccctgtct ttcagcaggc cccaccctc ctgagtggca 400  
ataaataaaa ttcggtatgc tg 422

<210> 363  
<211> 78  
<212> PRT  
<213> Homo sapiens

<400> 363  
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Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu  
20 25 30  
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu  
35 40 45  
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly  
50 55 60  
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val  
65 70 75  
Cys Asn Thr

<210> 364  
<211> 826  
<212> DNA  
<213> Homo sapiens

<400> 364  
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ctttctgagt ttcaaaaaca acagactagt actctaaaga actctttaaa 100  
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ttctgatgtg gggttcctcc actgtgttct gtgtgctatt aatatttacc 200  
attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250  
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300  
ttcccctccc ctccgattgt totaaataat tgaaagatgt ctgctgtgga 350  
aaaaggcatg tatttaaatc tgtatgattc tcaaccatct ttagttggga 400  
aaggtccttg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgttggt acgctagtaa 500  
aatagaaacc tgtgttttatt ctcagggtatt ttagaaacaa cagccatcat 550  
tttattttat gtgtgtgttc ttggctgtat tcataaatta tatattttgg 600  
gctatcaaat attacttcat tcaatataaa taacaatagt agaagttggt 650  
tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700  
ttgttgtaat agcctttgaa atttacagta ctgtctctct actatcttca 750  
gattacttga ttcaaataaa ccaattatgt ttgtaattga tattaataaa 800  
accagaataa aagttcatat ctaccc 826

<210> 365  
<211> 67  
<212> PRT  
<213> Homo sapiens

<400> 365  
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Thr Val Phe Cys Val Leu Leu Ile Phe Thr Ile Ala Glu Ala Ser  
20 25 30  
Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg  
35 40 45  
Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro  
50 55 60  
Leu Pro Ser Asp Cys Ser Lys  
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<210> 366  
<211> 2475  
<212> DNA  
<213> Homo sapiens

<400> 366  
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ttttgcagga tgatggtggc ccttcgagga gcttctgcat tgctggttct 150  
gttccttgca gcttttctgc ccccgccgca gtgtaccag gaccagcca 200  
tggtgcatta catctaccag cgctttogag tcttgagca agggctggaa 250  
aaatgtaccc aagcaacgag ggcatacatt caagaattcc aagagttctc 300  
aaaaaatata tctgtcatgc tgggaagatg tcagacctac acaagtgagt 350  
acaagagtgc agtgggtaac ttggcactga gagttgaacg tgcccaacgg 400  
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agaggacaag aactggcag aaatgttgct ccaagaagct gaagaagaga 500

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 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650  
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 gataacacca agccagctcc ccggaagcaa atcctaacac tttcctggca 750  
 gggaacaggc caagtgatct acaaaggttt tctatttttt cataaccaag 800  
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 gatcgaatgc tgctcccagg aggggtaggc cgagcattgg tttaccagca 900  
 ctccccctca acttacattg acctggctgt ggatgagcat gggctctggg 950  
 ccatccactc tgggccaggc acccatagcc atttggttct cacaagatt 1000  
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050  
 ccaggatgct gaagcctcat tcctcttggtg tggggttctc tatgtggtct 1100  
 acagtactgg gggccagggc cctcatcgca tcacctgcat ctatgatcca 1150  
 ctgggcacta tcagtgagga ggacttgccc aacttgttct tccccagag 1200  
 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250  
 atgcctggaa tgaaggaaac cagatcattt acaaactcca gacaaagaga 1300  
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 tgctctcttt cccaaatgtc actgccttag gtatcttcca agagctttag 1500  
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 ctcccctggc ctttgctgaa gctcttccct ctttttcaaa tgtctattga 1750  
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 tttcttttct tttttttgag acaaggctct actatgttgc ccaggctgg 1850  
 ctcaaactcc agagctcaag agatcctcct gcctcagcct cctaagtacc 1900  
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 ttgaggttta acctctattt ccctagccc tgtccttcca ctaagcttgg 2000  
 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttocag 2050  
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaaaca 2100

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaat 2150  
 tacaaagtga aagatacagc tagaaaatac tacaaatccc atagtttttc 2200  
 cattgcccaa ggaagcatca aatacgtatg tttgttcacc tactcttata 2250  
 gtcaatgcgt tcatcgtttc agcctaaaaa taatagtctg tcccttttagc 2300  
 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350  
 tcctccagaa aaccagtota aggggtgagga cccaactct agcctcctct 2400  
 tgtcttgctg tcctctgttt ctctctttct gctttaaatt caataaaagt 2450  
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367  
 <211> 402  
 <212> PRT  
 <213> Homo sapiens

<400> 367  
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 Leu Ala Ala Phe Leu Pro Pro Pro Gln Cys Thr Gln Asp Pro Ala  
 20 25 30  
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly  
 35 40 45  
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe  
 50 55 60  
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln  
 65 70 75  
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu  
 80 85 90  
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu  
 95 100 105  
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala  
 110 115 120  
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr  
 125 130 135  
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser  
 140 145 150  
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met  
 155 160 165  
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly  
 170 175 180  
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe  
 185 190 195  
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr  
 200 205 210

Leu	Ser	Trp	Gln	Gly	Thr	Gly	Gln	Val	Ile	Tyr	Lys	Gly	Phe	Leu
				215					220					225
Phe	Phe	His	Asn	Gln	Ala	Thr	Ser	Asn	Glu	Ile	Ile	Lys	Tyr	Asn
				230					235					240
Leu	Gln	Lys	Arg	Thr	Val	Glu	Asp	Arg	Met	Leu	Leu	Pro	Gly	Gly
				245					250					255
Val	Gly	Arg	Ala	Leu	Val	Tyr	Gln	His	Ser	Pro	Ser	Thr	Tyr	Ile
				260					265					270
Asp	Leu	Ala	Val	Asp	Glu	His	Gly	Leu	Trp	Ala	Ile	His	Ser	Gly
				275					280					285
Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly
				290					295					300
Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln
				305					310					315
Asp	Ala	Glu	Ala	Ser	Phe	Leu	Leu	Cys	Gly	Val	Leu	Tyr	Val	Val
				320					325					330
Tyr	Ser	Thr	Gly	Gly	Gln	Gly	Pro	His	Arg	Ile	Thr	Cys	Ile	Tyr
				335					340					345
Asp	Pro	Leu	Gly	Thr	Ile	Ser	Glu	Glu	Asp	Leu	Pro	Asn	Leu	Phe
				350					355					360
Phe	Pro	Lys	Arg	Pro	Arg	Ser	His	Ser	Met	Ile	His	Tyr	Asn	Pro
				365					370					375
Arg	Asp	Lys	Gln	Leu	Tyr	Ala	Trp	Asn	Glu	Gly	Asn	Gln	Ile	Ile
				380					385					390
Tyr	Lys	Leu	Gln	Thr	Lys	Arg	Lys	Leu	Pro	Leu	Lys			
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<210> 368  
 <211> 2281  
 <212> DNA  
 <213> Homo sapiens

<400> 368  
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 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150  
 ggaggagagg agcggccggc cgcctgcca aaaagcaaat ggatttccac 200  
 ctgacaaatc ttcgggatcc aagaagcaga aacaatatca gcggattcgg 250  
 aaggagaagc ctcaacaaca caacttcacc caccgcctcc tggctgcagc 300  
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 gcaaatacct ggctacctgt gcagatgatc gcaccatccg catctggagc 400  
 accaaggact tcctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag ccctgactgc agagccttca 500  
tcgtctggct ggccaacggg gacaccctcc gtgtcttcaa gatgaccaag 550  
cgggaggatg ggggctacac cttcacagcc accccagagg acttccctaa 600  
aaagcacaag ggcctgtca tcgacattgg cattgctaac acagggaagt 650  
ttatcatgac tgcctccagt gacaccactg tcctcatctg gagcctgaag 700  
ggtcaagtgc tgtctaccat caacaccaac cagatgaaca acacacacgc 750  
tgctgtatct ccctgtggca gatttgtagc ctcggtgtggc ttcaccccag 800  
atgtgaaggt ttgggaagtc tgctttggaa agaaggggga gttccaggag 850  
gtggtgcgag ccttcgaact aaagggccac tccgcggtg tgcactcggt 900  
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catggaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000  
tacttgctga agacaggccg ctttgaagag gcggcgggtg ccgcgcctg 1050  
ccgcctggcc ctctcccca acgcccaggt cttggccttg gccagtggca 1100  
gtagtattca tctctacaat acccggcggg gcgagaagga ggagtgcctt 1150  
gagcgggtcc atggcgagtg tatcgccaac ttgtcctttg acatcactgg 1200  
ccgctttctg gcctcctgtg gggaccgggc ggtgcggctg tttcacaaca 1250  
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gcctccaacg agagacccg ccagaggctg cagcagcagc tgaccaggc 1350  
ccaagagacc ctgaagagcc tgggtgccct gaagaagtga ctctgggagg 1400  
gcccggcgca gaggattgag gaggagggat ctggcctcct catggcactg 1450  
ctgccatctt tcctcccagg tggaagcctt tcagaaggag tctcctggtt 1500  
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gtgcttttct tcctcccagg ccagtggggt ggaatctgtc cccacctggc 1650  
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ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850  
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gtcatgaaag tggtaaaagt gggaaccagt gtgctttgaa accaaattag 2050



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aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100
tatatgggttg ggacttctct cttcgggaga tgatatcttg tttaaggaga 2150
cctotttttca gttcatcaag ttcatcagat atttgagtgc ccactctgtg 2200
cccaaataaa tatgagctgg ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

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<210> 369
<211> 447
<212> PRT
<213> Homo sapiens

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<400> 369
Met Glu Leu Ser Gln Met Ser Glu Leu Met Gly Leu Ser Val Leu
  1                      5                      10          15

Leu Gly Leu Leu Ala Leu Met Ala Thr Ala Ala Val Ala Arg Gly
          20                      25          30

Trp Leu Arg Ala Gly Glu Glu Arg Ser Gly Arg Pro Ala Cys Gln
          35                      40          45

Lys Ala Asn Gly Phe Pro Pro Asp Lys Ser Ser Gly Ser Lys Lys
          50                      55          60

Gln Lys Gln Tyr Gln Arg Ile Arg Lys Glu Lys Pro Gln Gln His
          65                      70          75

Asn Phe Thr His Arg Leu Leu Ala Ala Ala Leu Lys Ser His Ser
          80                      85          90

Gly Asn Ile Ser Cys Met Asp Phe Ser Ser Asn Gly Lys Tyr Leu
          95                      100         105

Ala Thr Cys Ala Asp Asp Arg Thr Ile Arg Ile Trp Ser Thr Lys
          110                     115         120

Asp Phe Leu Gln Arg Glu His Arg Ser Met Arg Ala Asn Val Glu
          125                     130         135

Leu Asp His Ala Thr Leu Val Arg Phe Ser Pro Asp Cys Arg Ala
          140                     145         150

Phe Ile Val Trp Leu Ala Asn Gly Asp Thr Leu Arg Val Phe Lys
          155                     160         165

Met Thr Lys Arg Glu Asp Gly Gly Tyr Thr Phe Thr Ala Thr Pro
          170                     175         180

Glu Asp Phe Pro Lys Lys His Lys Ala Pro Val Ile Asp Ile Gly
          185                     190         195

Ile Ala Asn Thr Gly Lys Phe Ile Met Thr Ala Ser Ser Asp Thr
          200                     205         210

Thr Val Leu Ile Trp Ser Leu Lys Gly Gln Val Leu Ser Thr Ile
          215                     220         225

Asn Thr Asn Gln Met Asn Asn Thr His Ala Ala Val Ser Pro Cys
          230                     235         240

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Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370  
 <211> 1415  
 <212> DNA  
 <213> Homo sapiens

<400> 370  
 tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50  
 catctaagca ggcagtgttt tgccttcacc ccaagtgacc atgagaggtg 100  
 ccacgcgagt ctcaatcatg ctctctctag taactgtgtc tgactgtgct 150  
 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200  
 ctgtgccatc agcctgtggc ttcgagggct gcggatgtgc accccgctgg 250  
 ggcgggaagg cgaggagtgc caccocggca gccacaaggt ccccttcttc 300  
 aggaacgca agcaccacac ctgtccttgc ttgcccaacc tgctgtgctc 350  
 caggttcccg gacggcaggt accgctgctc catggacttg aagaacatca 400

atttttaggc gcttgccctgg tctcaggata cccaccatcc ttttcctgag 450  
 cacagcctgg atttttattt ctgccatgaa acccagctcc catgactctc 500  
 ccagtcccta cactgactac cctgatctct cttgtctagt acgcacatat 550  
 gcacacaggc agacatacct cccatcatga catggtcccc aggctggcct 600  
 gaggatgtca cagcttgagg ctgtggtgtg aaaggtggcc agcctgggtc 650  
 tcttccctgc tcaggctgcc agagaggtgg taaatggcag aaaggacatt 700  
 cccctcccc tccccagggtg acctgctctc tttcctgggc cctgcccctc 750  
 tccccacatg tatccctcgg tctgaattag acattcctgg gcacaggctc 800  
 ttgggtgcat tgctcagagt cccaggctct ggctgaccc tcaggccctt 850  
 cacgtgaggt ctgtgaggac caatttgtgg gtagttcatc ttccctcgat 900  
 tggttaactc cttagtttca gaccacagac tcaagattgg ctcttcccag 950  
 agggcagcag acagtcaccc caaggcaggt gtagggagcc caggagggcc 1000  
 aatcagcccc ctgaagactc tggctccagt cagcctgtgg cttgtggcct 1050  
 gtgacctgtg accttctgcc agaattgtca tgctctgag gccccctctt 1100  
 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150  
 cattaaaatg caaatgggtg tgggtcaatc taatctgata ttgacatatt 1200  
 agaaggcaat taggggtgtt ccttaaacaa ctctttcca aggatcagcc 1250  
 ctgagagcag gttggtgact ttgaggaggg cagtctctg tcagattgg 1300  
 ggtgggagca agggacaggg agcaggcag gggctgaaag gggcactgat 1350  
 tcagaccagg gaggcaacta cacaccaaca tgctggcttt agaataaaag 1400  
 caccaactga aaaaa 1415

<210> 371  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 371  
 Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr  
 1 5 10 15  
 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val  
 20 25 30  
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg  
 35 40 45  
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys  
 50 55 60  
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His  
 65 70 75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372  
 <211> 1281  
 <212> DNA  
 <213> Homo sapiens

<400> 372  
 agcgcccggg cgtcggggcg gtaaaaggcc ggcagaaggg aggcacttga 50  
 gaaatgtctt tcttccagga cccaagtttc ttcacatggt ggatgtgggtc 100  
 cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150  
 acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200  
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250  
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300  
 caggctgttt cctctgtcga gaggaagctg cggatctgtc ctccctgaaa 350  
 agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400  
 catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450  
 tcttgatga aaagaaaaag ttctatgggt cacaaaggcg gaagatgatg 500  
 tttatgggat ttatccgtct gggagtgtgg tacaacttct tccgagcctg 550  
 gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600  
 gagttttcgt ggtgggatca ggaaagcagg gcattcttct tgagcaccga 650  
 gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaagctgc 700  
 taagatgatc aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750  
 aaactgcca gctcaggat aaccaggac attcacctgt gttcatggga 800  
 tgtattgttt ccatcgtgt ccctaaggag tgagaaacc atttatactc 850  
 tactctcagt atggattatt aatgtatttt aatattctgt ttagggccac 900  
 taaggcaaaa tagcccaaaa acaagactga caaaaatctg aaaaactaat 950  
 gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000  
 caggctgggt gcagtggctc acacctgtaa tcccagcact ttgggaggcc 1050  
 aaggtagca agtcacttga ggtcgggagt tcgagaccag cctgagcaac 1100  
 atggcgaaac cccgtctcta ctaaaaatac aaaaatcacc cgggtgtgggt 1150  
 ggcaggcacc tgtagtccca gtaaccggg aggtgagggc aggagaatca 1200  
 ctgaaacctg ggaggtggag gttgcgggtg gctgagatca caccactgta 1250  
 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 373  
 Met Ser Phe Leu Gln Asp Pro Ser Phe Phe Thr Met Gly Met Trp  
   1                  5                  10                  15  
 Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Ala Leu Ala Leu Leu  
                   20                  25                  30  
 Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala  
                   35                  40                  45  
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu  
                   50                  55                  60  
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala  
                   65                  70                  75  
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu  
                   80                  85                  90  
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu  
                   95                  100                  105  
 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu  
                   110                  115                  120  
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp  
                   125                  130                  135  
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe  
                   140                  145                  150  
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala  
                   155                  160                  165  
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile  
                   170                  175                  180  
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu  
                   185                  190                  195  
 Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu  
                   200                  205                  210  
 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala  
                   215                  220                  225  
 Ser Glu Lys Lys

<210> 374  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 374  
 acggaccgag gggtcgaggg agggacacgg accaggaacc tgagctaggt 50  
 caaagacgcc cgggccaggt gccccgtcgc aggtgccctt ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttccctcggcg ctgccaaccc 150  
gccaccacagc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200  
cctgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250  
ccacttctgc aaatgagaat agcactgttt tgccttcac caccagctcc 300  
agctccgatg gcaacctgcg tccggaagcc atcactgcta tcacgtggt 350  
cttctccctc ttggctgcct tgcctcggc tgtggggctg gcactgttgg 400  
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450  
agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500  
caaggagacg gtgcagggct gcctgcccac ctaggtcccc tctcctgcat 550  
ctgtctccct tcattgctgt gtgaccttgg ggaaaggcag tgccctctct 600  
gggcagtcag atccaccacg tgcttaatat cagggaagaa ggtacttcaa 650  
agactctgcc cctgaggtca agagaggatg gggctattca cttttatata 700  
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375  
<211> 123  
<212> PRT  
<213> Homo sapiens

<400> 375  
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Phe Leu Leu Ala Arg Trp Gly Arg Ala Trp Gly Gln Ile Gln Thr  
20 25 30  
Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser  
35 40 45  
Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile  
50 55 60  
Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Leu Ala Val Gly  
65 70 75  
Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu  
80 85 90  
Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala  
95 100 105  
Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys  
110 115 120  
Leu Pro Ile

<210> 376  
<211> 713  
<212> DNA  
<213> Homo sapiens

<400> 376  
aatatatcat ctatttatca ttaatcaata atgtattctt ttattccaat 50  
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100  
tttctgtcac tattattatt gttgggtatgt gaagctattt ggagatccaa 150  
ttcaggaagc aacacattgg agaattggcta ctttctatca agaaataaag 200  
agaaccacag tcaaccacaca caatcatctt tagaagacag tgtgactcct 250  
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300  
tgactcaaga gggttaattc ttggtgctga agcctggggc aggggtgtaa 350  
agaaaaacac ttagattcaa tgattgtaaa tttaaggcaa atacacatat 400  
tagtattacc ttagtgtaat gtatccctgt catatatata ataaggtgaa 450  
attataagta ccctatgcag ttggctggac agttctaaat tggactttat 500  
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550  
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600  
ttacagaatt gacattttaa atgcgataca gttagaatag gaaatatgac 650  
attagaaagg aagaatgaca gggagaaagg aaagaaggga aaatggtgcc 700  
aaggaaaaaa aaa 713

<210> 377  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 377  
Met Thr Phe Phe Leu Ser Leu Leu Leu Leu Val Cys Glu Ala  
1 5 10 15  
Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr  
20 25 30  
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser  
35 40 45  
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr  
50 55 60  
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu  
65 70 75  
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr  
80 85 90

<210> 378  
<211> 3265  
<212> DNA  
<213> Homo sapiens

<400> 378  
gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100  
 tgaataataa tggctttgaa gatattgtca ttgttataga tcctagtgtg 150  
 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200  
 ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250  
 tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300  
 ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350  
 actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400  
 agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450  
 caaaatgaat atggaccacc aggcaaactg tttgtccatg agtgggctca 500  
 cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550  
 gtgctaagtc aaaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600  
 ggtagaaaata gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650  
 atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700  
 ttcctgataa agtacaacaa gaaaagcat ccataatgtt tatgcaaagt 750  
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 tccaagccta caaaacataa agtgcaattt tagaagtaca tgggaggtga 850  
 ttagcaattc tgaggatttt aaaaacacca taccatgggt gacaccacct 900  
 cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgctt 950  
 agttcttgat aagtctggaa gcatgggggg taaggaccgc ctaaatacgaa 1000  
 tgaatcaagc agcaaaacat ttctgctgc agactgttga aaatggatcc 1050  
 tgggtgggga tggttcaact tgatagtact gccactattg taaataagct 1100  
 aatccaaata aaaagcagt atgaaagaaa cacactcatg gcaggattac 1150  
 ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200  
 tttcaggtga ttggagagct acattcccaa ctgatggat ccgaagtact 1250  
 gctgctgact gatggggagg ataacactgc aagttcttgt attgatgaag 1300  
 tgaaacaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350  
 gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400  
 tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450  
 ttacatcagg aaatactgat ctctcccaga agtcccttca gctcgaaagt 1500  
 aagggattaa cactgaatag taatgcctgg atgaacgaca ctgtcataat 1550  
 tgatagtaca gtgggaaagg acacgttctt tctcatcaca tggaacagtc 1600  
 tgctcccag tatttctctc tgggatccca gtggaacaat aatggaaaat 1650



ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700  
tgcaaagggtg ggcacttggg catacaatct tcaagccaaa gcgaaccag 1750  
aaacattaac tattacagta acttctcgag cagcaaattc ttctgtgcct 1800  
ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttccccag 1850  
ccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900  
gagccaatgt gactgctttc attgaatcac agaattggaca tacagaagtt 1950  
ttggaacttt tggataatgg tgcaggcgct gattctttca agaattgatg 2000  
agtctactcc aggtatttta cagcatatac agaaaatggc agatatagct 2050  
taaaagtctg ggctcatgga ggagcaaaaca ctgccaggct aaaattacgg 2100  
cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150  
aattgaagca aacccgcca aacctgaaat tgatgaggat actcagacca 2200  
ccttgaggga ttccagccga acagcatccg gaggtgcatt tgtggtatca 2250  
caagtcccaa gccttccctt gcctgaccaa taccaccaa gtcaaatcac 2300  
agaccttgat gccacagttc atgaggataa gattattctt acatggacag 2350  
caccaggaga taattttgat gttggaaaag ttcaacgtta tatcataaga 2400  
ataagtcaa gtattcttga tctaagagac agttttgatg atgctcttca 2450  
agtaaatact actgatctgt caccaaagga ggccaactcc aaggaaagct 2500  
ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatattt 2550  
attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600  
cattgcacaa gtaactttgt ttatccctca agcaaatoct gatgacattg 2650  
atcctacacc tactcctact cctactccta ctcttgataa aagtcataat 2700  
tctggagtta atatttctac gctggtattg totgtgattg ggtctgttgt 2750  
aattgttaac tttattttta gtaccaccat ttgaacctta acgaagaaaa 2800  
aaatcttcaa gtagacctag aagagagttt taaaaaaca aacaatgtaa 2850  
gtaaaggata tttctgaatc ttaaaattca tcccatgtgt gatcataaac 2900  
tcataaaaaat aattttaaga tgtcggaaaa ggatactttg attaaataaa 2950  
aacactcatg gatatgtaaa aactgtcaag attaaaattt aatagtttca 3000  
tttatttggt attttatttg taagaaatag tgatgaacaa agatcctttt 3050  
tcatactgat acctggttgt atattatttg atgcaacagt tttctgaaat 3100  
gatatttcaa attgcatcaa gaaattaaaa tcatctatct gagtagtcaa 3150  
aatacaagta aaggagagca aataaacaac atttgaaaa aaaaaaaaaa 3200  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

Met	Gly	Leu	Phe	Arg	Gly	Phe	Val	Phe	Leu	Leu	Val	Leu	Cys	Leu
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Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly
				20					25					30
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
				35					40					45
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
				50					55					60
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
				65					70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
				80					85					90
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
				95					100					105
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
				110					115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
				125					130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
				140					145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
				155					160					165
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
				170					175					180
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
				185					190					195
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
				200					205					210
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe
				215					220					225
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met
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Thr	Pro	Asp	Lys	Ser	His	Asn	Ser	Gly	Val	Asn	Ile	Ser	Thr	Leu
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<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

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<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

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Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu
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Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
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Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
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Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
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Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	95	100	105
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	110	115	120
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	125	130	135
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	140	145	150
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	155	160	165
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	170	175	180
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	185	190	195
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	200	205	210
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	215	220	225
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	230	235	240
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	245	250	255
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Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	275	280	285
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Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	305	310	315
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	320	325	330
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	335	340	345
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Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	380	385	390
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Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn	
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Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp	
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Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	
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Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	
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Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln	
				485					490					495	
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu	
				500					505					510	
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln	
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<213> Homo sapiens

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<211> 212

<212> PRT

<213> Homo sapiens

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Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys  
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Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys  
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Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro  
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Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile  
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Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro  
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Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile  
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Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly  
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Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp  
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Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly  
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Pro Ser

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<211> 1371

<212> DNA

<213> Homo sapiens

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 ggttaaaatg cactttctcc agctttgcc ctgtgggtga tgccttaaca 300  
 gtgacctgga attttctgc tctagacggg ggacctgagc agtttgtatt 350  
 ctactaccac atagatccct tccaacccat gagtgggcgg tttaaggacc 400  
 ggggtgtcttg ggatgggaat cctgagcggg acgatgcctc catccttctc 450  
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500  
 cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550  
 aactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600  
 gcctgtgcac tgatgatcat aatagtaatt gtagtggctc tottccagca 650  
 ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700  
 aatcaaaaga agaggaaagg ctcaaccaag agaaaaaggc ctctgtttat 750  
 ttagaagaca cagactaaca attttagatg gaagctgaga tgatttccaa 800  
 gaacaagaac cctagtattt cttgaagtta atggaaactt ttctttggct 850  
 tttccagttg tgacctgtt tccaaccagt tctgcagcat attagattct 900  
 agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950  
 gtcatacaca goctcattat taaggcttta tttaatttca gagtgtaaat 1000  
 tttttcaagt gtcattagg ttttataaac aagaagctac atttttgcc 1050  
 ttaagacact acttacagt ttatgacttg tatacacata tattgggtatc 1100  
 aaaggggata aaagccaatt tgtctgttac atttccttc acgtatttct 1150  
 tttagcagca cttctgtac taaagttaat gtgtttactc tctttccttc 1200  
 ccacattctc aattaaaagg tgagctaagc ctctcggtg tttctgatta 1250  
 acagtaaadc ctaaattcaa actgttaaact gacattttta ttttatgtc 1300  
 tctccttaac tatgagacac atcttgtttt actgaatttc tttcaatatt 1350  
 ccaggtgata gatttttgtc g 1371

<210> 389  
 <211> 215  
 <212> PRT  
 <213> Homo sapiens

<400> 389  
 Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly  
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Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctagaggcca gagc 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gagc 24

<210> 392  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 392  
gagaggactg cgggagtttg ggacotttgt gcagacgtgc tcatg 45

<210> 393  
<211> 471  
<212> DNA  
<213> Homo sapiens

<400> 393  
gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttott 50  
agcagtcctg gtactcttgg gagtttccat ctttctggtc tctgccaga 100  
atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150  
gatgatgaag cccctgatgc tgaaaccact gctgctgcaa ccaactgcgac 200  
cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250  
aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300  
gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350  
tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgatat 400  
cccccttatt tctaatacgt ttattttctt tcaaataaaa aataactatg 450  
agcaacataa aaaaaaaaaa a 471

<210> 394  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 394  
Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe  
1 5 10 15  
Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr  
20 25 30  
Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu  
35 40 45  
Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr  
50 55 60  
Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val  
65 70 75  
Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro  
80 85 90

<210> 395  
<211> 25

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 395  
gctccctgat cttcatgtca ccacc 25

<210> 396  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 396  
cagggacaca ctctaccatt cgggag 26

<210> 397  
<211> 42  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 397  
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398  
<211> 907  
<212> DNA  
<213> Homo sapiens

<400> 398  
ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtggttcc 50  
aaccttggac ccctaggggt ctggatttgc tggtaacaa gataacctga 100  
gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150  
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200  
ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250  
ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300  
gcaggagggg gacagtctctg ttgtgcttgg ttggacagta agagggtctt 350  
ggccagtcca ggggtggggg cggaactc cataaagaac cagaggggtct 400  
gggccccggc cacagagtca tctgccagc tctctgctg ctggccagtg 450  
ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500  
gcctgcgggc catggtccct gtctagggca gcaattctca accttcttgc 550  
tctcaggacc ccaaagagct ttcatgtat ctattgattt ttaccacatt 600  
agcaattaaa actgagaaat gggccgggca cggtggtca cgctgtaat 650

ccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700  
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750  
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800  
 gctgaggcag gaaaatcgct tgaaccagc aggcggacgt tgcggtgagc 850  
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900  
 tcacaca 907

<210> 399  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 399  
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala  
 1 5 10 15  
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu  
 20 25 30  
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly  
 35 40 45  
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg  
 50 55 60  
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg  
 65 70 75  
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn  
 80 85 90  
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu  
 95 100 105  
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln  
 110 115 120

<210> 400  
 <211> 893  
 <212> DNA  
 <213> Homo sapiens

<400> 400  
 gtcattgccag tgcctgtctt gtgcctgctc tgggccctgg caatggtgac 50  
 ccggcctgcc tcagcggccc ccattggcgg ccagaaactg gcacagcatg 100  
 aggagctgac cctgtctctt catgggaccc tgcagctggg ccaggccctc 150  
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200  
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250  
 ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300  
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350  
 gggggaggtg gcccaggcac agaaggtgct acgggacagc gtgcagcggc 400



tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450  
 gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggacct 500  
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550  
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600  
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650  
 cgccccgtga ggccccgtg cagggaggag ctgcctgttc actgggatca 700  
 gccagggcgc cgggccccac ttctgagcac agagcagaga cagacgcagg 750  
 cggggacaaa ggcagaggat gtagcccat tggggagggg tggaggaagg 800  
 acatgtaccc tttcatgcct acacaccct cattaaagca gagtcgtggc 850  
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401  
 <211> 198  
 <212> PRT  
 <213> Homo sapiens

<400> 401  
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val  
 1 5 10 15  
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala  
 20 25 30  
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu  
 35 40 45  
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu  
 50 55 60  
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu  
 65 70 75  
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu  
 80 85 90  
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu  
 95 100 105  
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala  
 110 115 120  
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val  
 125 130 135  
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu  
 140 145 150  
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala  
 155 160 165  
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln  
 170 175 180  
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402  
 <211> 1915  
 <212> DNA  
 <213> Homo sapiens

<400> 402  
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 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100  
 acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150  
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200  
 tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250  
 aagttcacaa gaaatgctac cttgcttcag aaggtttgaa gcattttccat 300  
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350  
 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400  
 caggtgtcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450  
 aagtttgttg acgtcaacgg aatcgctatc tccttcctca actgggaccg 500  
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550  
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600  
 atatgcgagt tcaccatccc taaataggtc tttctccaat gtgtcctcca 650  
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700  
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750  
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800  
 tgcccttcct ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850  
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900  
 tcacttgtag aaaccagttt tgttttcaaa aaatcacagt agcaatgcaa 950  
 ctcatcactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000  
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050  
 aggtgtctata taatccaaaa acttttcagc ctgttgctca ttctgtccca 1100  
 tgctggcaat aataccttgt cagccatta cccttatttt gaattgtcc 1150  
 atctcctggt gggacttgta tcttgtctgc catatcagaa cacaaacccc 1200  
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250  
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatttg 1300

atcaattttc attcccacca ttgcattaca acctotaact taaatgggta 1350  
 accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400  
 aaaagaacct acattttattt tgcttttagca tccttactct caccttttat 1450  
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatttat 1500  
 ttttttttagc catcattata tgtttaagtc tattatgggc aaccaatott 1550  
 tggaagctga aaactgaatt taaagaatgc tatcttggaa aattgcatac 1600  
 gtctgtgcaa ttttttattc tgcctagtgc tattctgctt gtttaactag 1650  
 attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700  
 tggaggggaaa tgggctttttt agaagcaaac aattttaaat atattttggt 1750  
 cttcaaataa atagtgttta aacattgaat gtgttttggt aacaatatcc 1800  
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850  
 tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900  
 aaaaaaaaaa aaaaa 1915

<210> 403  
 <211> 206  
 <212> PRT  
 <213> Homo sapiens

<400> 403  
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu  
 1 5 10 15  
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Leu Asp Gln Thr Thr  
 20 25 30  
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg  
 35 40 45  
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu  
 50 55 60  
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr  
 65 70 75  
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala  
 80 85 90  
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile  
 95 100 105  
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile  
 110 115 120  
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn  
 125 130 135  
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe  
 140 145 150  
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

	155		160		165									
Ala	Gln	Pro	Asn	Gly	Gly	Lys	Arg	Glu	Asn	Cys	Val	Leu	Phe	Ser
				170					175					180
Gln	Ser	Ala	Gln	Gly	Lys	Trp	Ser	Asp	Glu	Ala	Cys	Arg	Ser	Ser
				185					190					195
Lys	Arg	Tyr	Ile	Cys	Glu	Phe	Thr	Ile	Pro	Lys				
				200					205					

<210> 404  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 404  
 cctggttatc cccaggaact ccgac 25

<210> 405  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 405  
 ctcttgctgc tgcgacaggc ctc 23

<210> 406  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 406  
 cgccctccaa gactatggta aaaggagcct gccaggtgtc aatgac 46

<210> 407  
 <211> 570  
 <212> DNA  
 <213> Homo sapiens

<400> 407  
 gcgaggaccg ggtataagaa gcctcgtggc cttgcccggg cagccgcagg 50  
 ttccccgcgc gccccgagcc ccgcgcgcatt gaagctcgcc gccctcctgg 100  
 ggctctgcgt ggccctgtcc tgcagctccg ctgctgcttt cttagtgggc 150  
 tcggccaagc ctgtggccca gcctgtcgtt gcgctggagt cggcggcgga 200  
 ggccgggggc gggaccctgg ccaacccctc cggcaccctc aaccgctga 250  
 agctcctgct gaggagcctg ggcatccccg tgaaccacct catagagggc 300  
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400  
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggtga 450  
 aaaccccgcc gcggggagga cgtccatcc cttcccccg gccctctca 500  
 ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550  
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 408  
 Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys  
     1                    5                    10                    15  
 Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala  
                     20                    25                    30  
 Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly  
                     35                    40                    45  
 Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu  
                     50                    55                    60  
 Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser  
                     65                    70                    75  
 Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val  
                     80                    85                    90  
 Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly  
                     95                    100

<210> 409  
 <211> 2089  
 <212> DNA  
 <213> Homo sapiens

<400> 409  
 tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50  
 aaggaggga ctccttggcc tccgcagccg atcacatgaa ggtggtgcca 100  
 agtctcctgc tctccgtcct cctggcacag gtgtggctgg taccggctt 150  
 ggcccccagt cctcagtcgc cagagacccc agcccctcag aaccagacca 200  
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250  
 agcgaggaga aggccggtga ggaagagaaa gcctggctga tggccagcag 300  
 gcagcagctt gccaaggaga cttcaaactt cggattcagc ctgctgcgaa 350  
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttggcatg 400  
 tccttggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450  
 ccagatcaag agagggtcc acttgcaggc cctgaagccc accaagccc 500

ggctcctgcc ttccctcttt aagggactca gagagaccct ctcccgaac 550  
 ctggaactgg gcctctcaca ggggagtttt gccttcatcc acaaggattt 600  
 tgatgtcaaa gagactttct tcaatttatc caagaggat tttgatacag 650  
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700  
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750  
 tgagattaat cctgaaacca aattaattct tgtggattac atcttgttca 800  
 aagggaatg gttgacccca tttgaccctg tcttcaccga agtcgacact 850  
 ttccacctgg acaagtacaa gaccattaag gtgcccata tgtacggtgc 900  
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 aactgcccta ccaaggaaat gccaccatgc tgggtggtcct catggagaaa 1000  
 atgggtgacc acctcgccct tgaagactac ctgaccacag acttgggtga 1050  
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 agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150  
 ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200  
 tactggaaga aatctccaag tatccagggt tttacgaaga acagtgattg 1250  
 aagttgatga aaggggcact gaggcagtgg caggaatctt gtcagaaatt 1300  
 actgottatt ccatgcctcc tgtcatcaaa gtggaccggc catttcattt 1350  
 catgatctat gaagaaacct ctggaatgct tctgtttctg ggcagggtgg 1400  
 tgaatccgac tctctataa ttcaggacat gcataagcac ttcgtgctgt 1450  
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 cccagcagat gcctgaaacg gtggacagtg ctgaacctta tatatatttt 1650  
 ttctacaca tacataccta tgataaagtt taatttataa attaggcaca 1700  
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 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800  
 aagtgactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850  
 ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900  
 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950  
 tggaattttt catttaatgt ttttggacca tggttgacca tggtttaactg 2000  
 agactgcaga aagcaaaacc atggataagg gaggactact acaaaagcat 2050  
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410  
 <211> 444  
 <212> PRT  
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln	1	5	10	15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu	20	25	30	
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro	35	40	45	
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala	50	55	60	
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu	65	70	75	
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile	80	85	90	
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met	95	100	105	
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr	110	115	120	
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro	125	130	135	
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu	140	145	150	
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe	155	160	165	
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn	170	175	180	
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe	185	190	195	
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn	200	205	210	
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn	215	220	225	
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly	230	235	240	
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr	245	250	255	
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr	260	265	270	
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys	275	280	285	

His Val Leu Lys	Leu Pro Tyr Gln Gly	Asn Ala Thr Met Leu Val	290	295	300
Val Leu Met Glu	Lys Met Gly Asp His	Leu Ala Leu Glu Asp Tyr	305	310	315
Leu Thr Thr Asp	Leu Val Glu Thr Trp	Leu Arg Asn Met Lys Thr	320	325	330
Arg Asn Met Glu	Val Phe Phe Pro Lys	Phe Lys Leu Asp Gln Lys	335	340	345
Tyr Glu Met His	Glu Leu Leu Arg Gln	Met Gly Ile Arg Arg Ile	350	355	360
Phe Ser Pro Phe	Ala Asp Leu Ser Glu	Leu Ser Ala Thr Gly Arg	365	370	375
Asn Leu Gln Val	Ser Arg Val Leu Arg	Arg Thr Val Ile Glu Val	380	385	390
Asp Glu Arg Gly	Thr Glu Ala Val Ala	Gly Ile Leu Ser Glu Ile	395	400	405
Thr Ala Tyr Ser	Met Pro Pro Val Ile	Lys Val Asp Arg Pro Phe	410	415	420
His Phe Met Ile	Tyr Glu Glu Thr Ser	Gly Met Leu Leu Phe Leu	425	430	435
Gly Arg Val Val	Asn Pro Thr Leu Leu		440		

<210> 411  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<400> 411  
 ctgggatcag ccaactgcagc tccctgagca ctctctacag agacgcggac 50  
 cccagacatg aggaggctcc tcctggtcac cagcctggtg gttgtgctgc 100  
 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150  
 gtcaaactact ggccctcaga gcaggaccca gagaaggcct ggggcgcccg 200  
 tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttccttg 250  
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300  
 aggggccccca tccttcagcag caccaaggcc tggatggaga ccgaggacac 350  
 cctgggcccgt gtcttgagtc ccgagcccga ccatgacagc ctgtaccacc 400  
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450  
 ccaaatacacc aggtgctcct gggaccggag gaagaccaag accacatcta 500  
 ccacccccag taggggtcca ggggccatca ctgccccgc cctgtcccaa 550  
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600



aataaaccccc agcaggcaaaa aaaaaaaaaa aaaaaa 636

<210> 412  
<211> 151  
<212> PRT  
<213> Homo sapiens

<400> 412  
Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu  
1 5 10 15  
Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met  
20 25 30  
Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp  
35 40 45  
Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val  
50 55 60  
Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu  
65 70 75  
Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys  
80 85 90  
Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro  
95 100 105  
Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp  
110 115 120  
Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln  
125 130 135  
Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro  
140 145 150  
Gln

<210> 413  
<211> 1176  
<212> DNA  
<213> Homo sapiens

<400> 413  
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aggagctctc tgtaccaag gaaagtgcag ctgagactca gacaagatta 100  
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150  
tgagtagac atgaggctaa tacttacttc aaggaatgga cctgttcttc 200  
gtctccatct ctgccagaa gctgcaagga aatcaaagac gaatgtccta 250  
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tggtatctac 300  
cagaccttct gtgacatgac ctctgggggt ggcggctgga ccctggtggc 350  
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450  
 tgggccaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500  
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550  
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600  
 ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650  
 gtttggcatc taccagaaat atccagtga atattggagaa ggaaagtgtt 700  
 ggactgacaa cggcccggtg atccctgtgg tctatgattt tggcgacgcc 750  
 cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800  
 gggatttggt cagttcaggg tattttaataa cgagagagca gccaacgcct 850  
 tgtgtgctgg aatgaggggt accggatgta acactgagca tcaactgcatt 900  
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950  
 ttctggtttt gattggagtg gatattggaac tcatgttggg tacagcagca 1000  
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050  
 tgtgggaggg aaccagacc tctcctccca accatgagat cccaaggatg 1100  
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150  
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
1				5					10					15
Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

125					130					135				
Asn	Pro	Gly	Tyr	Tyr	Asp	Ile	Gln	Ala	Lys	Asp	Leu	Gly	Ile	Trp
				140					145					150
His	Val	Pro	Asn	Lys	Ser	Pro	Met	Gln	His	Trp	Arg	Asn	Ser	Ser
				155					160					165
Leu	Leu	Arg	Tyr	Arg	Thr	Asp	Thr	Gly	Phe	Leu	Gln	Thr	Leu	Gly
				170					175					180
His	Asn	Leu	Phe	Gly	Ile	Tyr	Gln	Lys	Tyr	Pro	Val	Lys	Tyr	Gly
				185					190					195
Glu	Gly	Lys	Cys	Trp	Thr	Asp	Asn	Gly	Pro	Val	Ile	Pro	Val	Val
				200					205					210
Tyr	Asp	Phe	Gly	Asp	Ala	Gln	Lys	Thr	Ala	Ser	Tyr	Tyr	Ser	Pro
				215					220					225
Tyr	Gly	Gln	Arg	Glu	Phe	Thr	Ala	Gly	Phe	Val	Gln	Phe	Arg	Val
				230					235					240
Phe	Asn	Asn	Glu	Arg	Ala	Ala	Asn	Ala	Leu	Cys	Ala	Gly	Met	Arg
				245					250					255
Val	Thr	Gly	Cys	Asn	Thr	Glu	His	His	Cys	Ile	Gly	Gly	Gly	Gly
				260					265					270
Tyr	Phe	Pro	Glu	Ala	Ser	Pro	Gln	Gln	Cys	Gly	Asp	Phe	Ser	Gly
				275					280					285
Phe	Asp	Trp	Ser	Gly	Tyr	Gly	Thr	His	Val	Gly	Tyr	Ser	Ser	Ser
				290					295					300
Arg	Glu	Ile	Thr	Glu	Ala	Ala	Val	Leu	Leu	Phe	Tyr	Arg		
				305					310					

<210> 415  
 <211> 1281  
 <212> DNA  
 <213> Homo sapiens

<400> 415  
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 cggctgggag cccacgaggc tgccgcatcc tgccctcgga acaatgggac 100  
 tcggcgcgcg aggtgcttgg gcgcgcgtgc tcctggggac gctgcaggtg 150  
 ctagcgctgc tgggggcccgc ccatgaaagc gcagccatgg cggcatctgc 200  
 aaacatagag aattctgggc ttccacacaa ctccagtgtt aactcaacag 250  
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300  
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350  
 caccaccatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400  
 tctcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450  
 agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550  
ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600  
gttggtggta ttgtattaac gctgggagtt ttatctattc tttacattgg 650  
atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700  
aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaatacag 750  
attgatgctg cccatatcaat taatttttgt ttattaatag tttaaaacaa 800  
tattctcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850  
gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900  
tgaaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950  
gttcatagta agacaaacaa gtcctatctt ttttttttgg ctgggggtggg 1000  
ggcattggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050  
agaatgcat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100  
tttgggtatc tttttagtct cacataaaga acttcagtgc ttttcagagc 1150  
tggatatatc ttaattacta atgccacaca gaaattatac aatcaaacta 1200  
gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250  
tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly	1	5	10	15
Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala	20	25	30	
Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His	35	40	45	
Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser	50	55	60	
Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr	65	70	75	
Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys	80	85	90	
Pro	Thr	Ala	Ala	Ser	Asn	Thr	Thr	Thr	Pro	Gly	Met	Val	Ser	Thr	95	100	105	
Asn	Met	Thr	Ser	Thr	Thr	Leu	Lys	Ser	Thr	Pro	Lys	Thr	Thr	Ser	110	115	120	
Val	Ser	Gln	Asn	Thr	Ser	Gln	Ile	Ser	Thr	Ser	Thr	Met	Thr	Val				

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140	145	150		
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155	160	165		
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170	175	180		
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185	190	195		
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200	205			

<210> 417

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 417

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cagccggggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccga 50
gccggggagcc ggtcgcgggg gctccgggct gtgggaaccgc tgggccccca 100
gcgatggcga ccctgtgggg aggccttctt cggcttggct ccttgctcag 150
cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200
ccgccaagaa tttcagggat gtcagatgta aatgtatctg ccctccctat 250
aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300
tgattgcctt catgttggtg agcccatgcc tgtgcggggg cctgatgtag 350
aagcatactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400
acaatcaagg ttaccattat aatttatctc tccattttgg gccttctact 450
tctgtacatg gtatatctta ctctggttga gccatactg aagaggcgcc 500
tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtogagc 600
caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
tccaagagca gcgaaagtct gtctttgacc ggcatgttgt cctcagctaa 700
ttgggaattg aattcaagg gactagaaag aaacaggcag acaactggaa 750
agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
ccaactgttg ctggaagatt caaaaactgga agcaaaaact tgcttgattt 850
ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
aaagtcagcc aataagtctt ttcctatttg tgacttttac taataaaaat 950
aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

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ctttttcacc acatagtttt aacttgactt tcaagataat tttcaggggtt 1050  
 tttgttggtg ttgttttttg tttgtttggt ttgggtgggag aggggagggga 1100  
 tgccgtgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150  
 ttttgtaaag agaccttacc ttctattttc gagtttcatt tatattttgc 1200  
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250  
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300  
 atctaaaatg cctgggtggct tttcacaaaa agcagatttt cttcatgtac 1350  
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca tttgctagtt 1400  
 tactctaaag actaaacata gtcttggtgt gtgtgggtctt actcatcttc 1450  
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500  
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550  
 tcagcatttc cggtcgtggg gagaggcagc tgtttgagct ccaatatgtg 1600  
 cagctttgaa ctagggctgg ggttggtggg gcctcttctg aaaggtctaa 1650  
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700  
 acaataaaaa taatttttga aacatcaa 1728

<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

Met	Ala	Thr	Leu	Trp	Gly	Gly	Leu	Leu	Arg	Leu	Gly	Ser	Leu	Leu
1				5					10					15
Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu
				20					25					30
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile
				35					40					45
Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn
				50					55					60
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met
				65					70					75
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu
				80					85					90
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile
				95					100					105
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Leu	Tyr	Met	Val
				110					115					120
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly
				125					130					135

His	Ala	Gln	Leu	Ile	Gln	Ser	Asp	Asp	Asp	Ile	Gly	Asp	His	Gln
				140					145					150
Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu	Ala	Arg	Ser	Arg	Ser	Arg
				155					160					165
Ala	Asn	Val	Leu	Asn	Lys	Val	Glu	Tyr	Ala	Gln	Gln	Arg	Trp	Lys
				170					175					180
Leu	Gln	Val	Gln	Glu	Gln	Arg	Lys	Ser	Val	Phe	Asp	Arg	His	Val
				185					190					195

Val Leu Ser

<210> 419  
 <211> 681  
 <212> DNA  
 <213> Homo sapiens

<400> 419  
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 gccttcctgt ccgcgggaa ggcgcaggag ccgccgccga cacctgaagg 150  
 aaaattgggc cgatttcac ctatgatgca tcatcaccag gcaccctcag 200  
 atggccagac tcttggggt cgtttccaga ggtctcacct tgccgaggca 250  
 ttgcaaagg ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300  
 aagaggctctg atggggcaga ttattccaat ctacggtttt gggatttttt 350  
 tatatatact gtacattcta ttaaggtaa gtagaatcat cctaatacata 400  
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450  
 aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500  
 ctgcctcttc ttcatgaggt acttaggata gccattattt cagtttcaca 550  
 taagaatggt tactcaatgt ttaagtgttt tgccccaaaa ttcacaacta 600  
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650  
 gagtataca attcaatgca ctcccctgcc a 681

<210> 420  
 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 420  
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu  
 1 5 10 15  
 Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg  
 20 25 30  
 Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly  
 35 40 45

Arg	Phe	Pro	Pro	Met	Met	His	His	His	Gln	Ala	Pro	Ser	Asp	Gly
				50					55					60
Gln	Thr	Pro	Gly	Ala	Arg	Phe	Gln	Arg	Ser	His	Leu	Ala	Glu	Ala
				65					70					75
Phe	Ala	Lys	Ala	Lys	Gly	Ser	Gly	Gly	Gly	Ala	Gly	Gly	Gly	Gly
				80					85					90
Ser	Gly	Arg	Gly	Leu	Met	Gly	Gln	Ile	Ile	Pro	Ile	Tyr	Gly	Phe
				95					100					105
Gly	Ile	Phe	Leu	Tyr	Ile	Leu	Tyr	Ile	Leu	Phe	Lys	Val	Ser	Arg
				110					115					120
Ile	Ile	Leu	Ile	Ile	Leu	His	Gln							
				125										

<210> 421

<211> 1630

<212> DNA

<213> Homo sapiens

<400> 421

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cggctcgagt gcagctgtgg ggagatttca gtgcattgcc tcccctgggt 50
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aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300
tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggc tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500
gccc aaagag ctcatggtcc atgtgggtgg attgattcag atgggatgtg 550
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<211> 394

<212> PRT

<213> Homo sapiens

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Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln
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Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser
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Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser
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Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp
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Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu
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Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val
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Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu
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	215	220	225		
Glu Ser Asp Gly	Gly Asn Tyr Thr Cys	Ser Ile His Leu Gly	Asn		
	230	235	240		
Leu Val Phe Lys	Lys Thr Ile Val Leu	His Val Ser Pro Glu	Glu		
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Pro Arg Thr Leu	Val Thr Pro Ala Ala	Leu Arg Pro Leu Val	Leu		
	260	265	270		
Gly Gly Asn Gln	Leu Val Ile Ile Val	Gly Ile Val Cys Ala	Thr		
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	290	295	300		
Gly Asn Lys Ser	Ser Val Asn Ser Thr	Val Leu Val Lys Asn	Thr		
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Lys Lys Thr Asn	Pro Glu Ile Lys Glu	Lys Pro Cys His Phe	Glu		
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Arg Cys Glu Gly	Glu Lys His Ile Tyr	Ser Pro Ile Ile Val	Arg		
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Glu Val Ile Glu	Glu Glu Glu Pro Ser	Glu Lys Ser Glu Ala	Thr		
	350	355	360		
Tyr Met Thr Met	His Pro Val Trp Pro	Ser Leu Arg Ser Asp	Arg		
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 gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600  
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 35 40 45  
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn  
 50 55 60  
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln  
 65 70 75  
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu  
 80 85 90  
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn  
 95 100 105  
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn  
 110 115 120  
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Ala	Arg	Thr	His	Leu	Ile	Arg	Trp	Val	Gly	Leu	Ser	Arg	Gln	Lys
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Asp Gln Leu Pro

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<210> 494  
<211> 1231  
<212> DNA  
<213> Homo Sapien

<400> 494  
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ccgcgatccc ggcccggggc tgtggcgctg actccgaccc aggcagccag 100  
cagcccgcgc gggagccgga ccgccgccgg aggagctcgg acggcatgct 150  
gagccccctc ctttgctgaa gcccgagtgc ggagaagccc gggcaaacgc 200  
aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250  
gaggagaagg aggaggagc gaaccagag aggggcagca aaagaagcgg 300  
tggtggtggg cgtcgtggcc atggcggcgg ctatcgccag ctcgctcatc 350  
cgtcagaaga ggcaagcccg cgagcgcgag aaatccaacg cctgcaagtg 400  
tgtcagcagc ccagcaaag gcaagaccag ctgcgacaaa aacaagttaa 450  
atgtcttttc ccgggtcaaa ctcttcggct ccaagaagag gcgcagaaga 500  
agaccagagc ctcagcttaa gggatatgtt accaagctat acagccgaca 550  
aggctaccac ttgcagctgc aggcgatgg aaccattgat ggcaccaaag 600  
atgaggacag caettacact ctgtttaacc tcatccctgt gggctctcga 650  
gtggtggcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700  
tgagggatac ttgtacacct cggaactttt cacacctgag tgcaaattca 750  
aagaatcagt gtttgaaaat tattatgtga catattcatc aatgatatac 800  
cgtcagcagc agtcaggccg aggggtggtat ctgggtctga acaaagaagg 850  
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900



ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950  
gatctcacgg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000  
aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050  
caacgtagcc agtgagggca aaagaagggc tctgtaacag aaccttacct 1100  
ccaggtgctg ttgaattctt ctagcagtc ttcacccaaa agttcaaatt 1150  
tgtcagtgac atttaccaaa caaacaggca gagttcacta ttctatctgc 1200  
cattagacct tcttatcatc cataactaaag c 1231

<210> 495  
<211> 245  
<212> PRT  
<213> Homo Sapien

<400> 495  
Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln  
1 5 10 15  
Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser  
20 25 30  
Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val  
35 40 45  
Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg  
50 55 60  
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser  
65 70 75  
Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp  
80 85 90  
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile  
95 100 105  
Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys  
110 115 120  
Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu  
125 130 135  
Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn  
140 145 150  
Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser  
155 160 165  
Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met  
170 175 180  
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu  
185 190 195  
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His  
200 205 210  
Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

	215		220		225
Ser Arg Ser Val	Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser				
	230		235		240
His Asn Glu Ser Thr					
	245				

<210> 496  
 <211> 1471  
 <212> DNA  
 <213> Homo Sapien

<400> 496  
 ccaggatgga gctggggcct gtatagccat attattgttc tatgctacta 50  
 gacatggggg ggacttggtg aaaaaggtat tatccagcca gagggctctgg 100  
 gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatattt 150  
 tggggggatt tcagtgaaaa aagtggggga tcccctccat ttagagtgtg 200  
 gcaaaggaaa aaacaccaag gttgggttcc ttctgacat tggcagtgcc 250  
 ccagtagggg tgggatgagc gaatattccc aaagctaaag tcccacaccc 300  
 tgtagattac aagagtggat ttggcaggag tgtgcccac aatacagtgg 350  
 aaaggtgcct gaagatatatt aaaccacgtc ttggaaattt agtgggtctt 400  
 ggctttggga taggtgaagt gaggacagac actggagagg agggaaaggg 450  
 gacgttttca ataggaggca aaactcgagg gtgggatcca ctgaggagta 500  
 cataggctgc tggatctggt ggagccagca ctgggcccac ggggtggtaac 550  
 tggctgtctg ggaggggggt acgtgagggg ggggtctggg gcttatcctc 600  
 aggtcctgtg ggtggggcag cgagtcgggg cctgagcgtc aagagcatgc 650  
 cctagtgagc gggctcctct gggggagccc agcgcgctcc gggcgctgc 700  
 cggtttgggg gtgtctcctc ccggggcgct atggcgggcg tggccagtag 750  
 cctgatccgg cagaagcggg aggtccgcga gcccgggggc agccggccgg 800  
 tgtcggcgca gcggcgctg tgtcccgcg gcaccaagtc cctttgccag 850  
 aagcagctcc tcatcctgct gtccaaggtg cgactgtgcg gggggcggcc 900  
 cgcgcgggcc gaccgcggcc cggagcctca gctcaaaggc atcgtcacca 950  
 aactgttctg ccgccagggt ttctacctcc aggcgaatcc cgacggaagc 1000  
 atccagggca cccagagga taccagctcc ttcacccact tcaacctgat 1050  
 ccctgtgggc ctccgtgtgg tcaccatcca gagcgccaag ctgggtcact 1100  
 acatggccat gaatgctgag ggactgtct acagttcgcc gcatttcaca 1150  
 gctgagtgtc gctttaagga gtgtgtcttt gagaattact acgtcctgta 1200  
 cgcctctgct ctctaccgcc agcgtcgttc tggccggggc tggtagctcg 1250

gcctggacaa ggagggccag gtcattgaagg gaaaccgagt taagaagacc 1300  
aaggcagctg cccactttct gcccaagctc ctggaggtgg ccatgtacca 1350  
ggagcctttct ctccacagtg tccccgaggg ctccccttcc agtccccctg 1400  
ccccctgaaa tgtagtccct ggactggagg ttccctgcac tcccagtgag 1450  
ccagccacca ccacaacctg t 1471

<210> 497  
<211> 225  
<212> PRT  
<213> Homo Sapien

<400> 497  
Met Ala Ala Leu Ala Ser Ser Leu Ile Arg Gln Lys Arg Glu Val  
1 5 10 15  
Arg Glu Pro Gly Gly Ser Arg Pro Val Ser Ala Gln Arg Arg Val  
20 25 30  
Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile  
35 40 45  
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro  
50 55 60  
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu  
65 70 75  
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser  
80 85 90  
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn  
95 100 105  
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys  
110 115 120  
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser  
125 130 135  
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe  
140 145 150  
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg  
155 160 165  
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln  
170 175 180  
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His  
185 190 195  
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser  
200 205 210  
Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro  
215 220 225

<210> 498  
<211> 744

<212> DNA  
<213> Homo Sapien

<400> 498  
atggccgcgg ccatcgctag cggcttgatc cgccagaagc ggcaggcgcg 50  
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccca 100  
gcaagaaccg cgggctctgc aacggcaacc tgggtgatat cttctccaaa 150  
gtgcgcatct tcggcctcaa gaagcgcagg ttgcggcgcc aagatcccca 200  
gtcaagggt atagtgaacca ggttatattg caggcaaggc tactacttgc 250  
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300  
tctacactct tcaacctcat accagtggga ctacgtgttg ttgccatcca 350  
gggagtgaaa acaggggttg atatagccat gaatggagaa ggttacctct 400  
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450  
gaaaattatt atgtaatcta ctcattccatg ttgtacagac aacaggaatc 500  
tggtagagcc tggtttttgg gattaaataa ggaagggcaa gctatgaaag 550  
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600  
ttggaagttg ccatgtaccg agaaccatct ttgcatgatg ttggggaaac 650  
ggccccgaag cctgggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700  
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 499  
<211> 247  
<212> PRT  
<213> Homo Sapien

<400> 499  
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln  
1 5 10 15  
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg  
20 25 30  
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val  
35 40 45  
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg  
50 55 60  
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu  
65 70 75  
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala  
80 85 90  
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn  
95 100 105  
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys  
110 115 120

Thr	Gly	Leu	Tyr	Ile	Ala	Met	Asn	Gly	Glu	Gly	Tyr	Leu	Tyr	Pro	
				125					130					135	
Ser	Glu	Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	
				140					145					150	
Glu	Asn	Tyr	Tyr	Val	Ile	Tyr	Ser	Ser	Met	Leu	Tyr	Arg	Gln	Gln	
				155					160					165	
Glu	Ser	Gly	Arg	Ala	Trp	Phe	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Gln	
				170					175					180	
Ala	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Pro	Ala	Ala	His	
				185					190					195	
Phe	Leu	Pro	Lys	Pro	Leu	Glu	Val	Ala	Met	Tyr	Arg	Glu	Pro	Ser	
				200					205					210	
Leu	His	Asp	Val	Gly	Glu	Thr	Val	Pro	Lys	Pro	Gly	Val	Thr	Pro	
				215					220					225	
Ser	Lys	Ser	Thr	Ser	Ala	Ser	Ala	Ile	Met	Asn	Gly	Gly	Lys	Pro	
				230					235					240	
Val	Asn	Lys	Ser	Lys	Thr	Thr									
				245											

<210> 500  
 <211> 2906  
 <212> DNA  
 <213> Homo Sapien

<400> 500  
 ggggagagga attgaccatg taaaaggaga cttttttttt tgggtggtggt 50  
 ggctgttggtg tgccttgcaa aaatgaagga tgcaggacgc agctttctcc 100  
 tggaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150  
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200  
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250  
 ttggtgtggt ctgacataaa taaataatct taaagcagct gttccccctcc 300  
 ccacccccaa aaaaaaggat gattggaaat gaagaaccga ggattcacia 350  
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400  
 gatatttttg gaatgaaaag tttggggctt ttttagtaaa gtaaagaact 450  
 ggtgtggtgg tgttttcctt tctttttgaa tttcccacia gaggagagga 500  
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550  
 gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600  
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650  
 ttcatacaacc tccttttttt taaattttta ttccttttgg tatcaagatc 700  
 atgcgttttc tcttgttctt aaccacctgg atttccatct ggatgttget 750

gtgatcagtc tgaataacaa ctgtttgaat tccagaagga ccaacaccag 800  
 ataaattatg aatggtgaac aagatgaact tacatccaca gcagataatg 850  
 ataggtccta ggtttaacag ggccctatctt gacccctgc ttgtggtgct 900  
 gctggctctt caacttcttg tgggtggtgg tctggtgcgg gctcagacct 950  
 gcccttctgt gtgctcctgc agcaaccagt tcagcaaggt gatttgtgtt 1000  
 cggaaaaacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050  
 gctgaacctc catgagaacc aaatccagat catcaaagt aacagcttca 1100  
 agcacttgag gcacttgga atcctacagt tgagtaggaa ccatatcaga 1150  
 accattgaaa ttggggcttt caatggtctg gogaacctca aactctgga 1200  
 actctttgac aatcgtctta ctaccatccc gaatggagct tttgtatact 1250  
 tgtctaaact gaaggagctc tggttgcgaa acaaccccat tgaaagcatc 1300  
 cttcttatg cttttaacag aattccttt ttgcccgcac tagacttagg 1350  
 ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggctctgt 1400  
 ccaacttgag gtatttgaac cttgccatgt gcaaccttcg ggaaatccct 1450  
 aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500  
 tttatctgcc atcaggcctg gctctttcca gggtttgatg caccttcaaa 1550  
 aactgtggat gatacagtc cagattcaag tgattgaacg gaatgccttt 1600  
 gacaaccttc agtcaactag ggagatcaac ctggcacaca ataactaac 1650  
 attactgcct catgacctct tcaactccctt gcatcatcta gagcggatac 1700  
 atttacatca caacccttgg aactgtaact gtgacatact gtggctcagc 1750  
 tgggtgataa aagacatggc cccctogaac acagcttggt gtgcccggtg 1800  
 taacactcct cccaatctaa aggggaggta cattggagag ctgcaccaga 1850  
 attacttcac atgctatgct ccggtgattg tggagcccc tgcagacctc 1900  
 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950  
 cctgacatct gtatcttggg ttactccaaa tggaacagtc atgacacatg 2000  
 gggcgtacaa agtgccgata gctgtgctca gtgatggtac gttaaatttc 2050  
 acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtgagtaa 2100  
 ttccgttggg aatactactg cttcagccac cctgaatggt actgcagcaa 2150  
 ccactactcc tttctcttac ttttcaacog tcacagtaga gactatggaa 2200  
 ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtccactcc 2250  
 agtggtcgac tgggagacca ccaatgtgac caoctctctc acaccacaga 2300  
 gcacaaggtc gacagagaaa accttcacca tcccagtgac tgatataaac 2350

agtgggatcc caggaattga tgaggatcatg aagactacca aaatcatcat 2400  
 tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggtcattt 2450  
 tctacaagat gaggaagcag caccatcggc aaaaccatca cgccccaaca 2500  
 aggactgttg aaattattaa tgtggatgat gagattaagg gagacacacc 2550  
 catggaaagc cacctgccc a tgcctgctat cgagcatgag cacctaaatc 2600  
 actataactc atacaaatct cccttcaacc acacaacaac agttaacaca 2650  
 ataaattcaa tacacagttc agtgcattgaa ccgttattga tccgaatgaa 2700  
 ctctaaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750  
 caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800  
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaaca 2850  
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900  
 caaaaa 2906

<210> 501  
 <211> 640  
 <212> PRT  
 <213> Homo Sapien

<400> 501

Met	Leu	Asn	Lys	Met	Thr	Leu	His	Pro	Gln	Gln	Ile	Met	Ile	Gly
1				5					10					15
Pro	Arg	Phe	Asn	Arg	Ala	Leu	Phe	Asp	Pro	Leu	Leu	Val	Val	Leu
			20						25					30
Leu	Ala	Leu	Gln	Leu	Leu	Val	Val	Ala	Gly	Leu	Val	Arg	Ala	Gln
			35						40					45
Thr	Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val
			50						55					60
Ile	Cys	Val	Arg	Lys	Asn	Leu	Arg	Glu	Val	Pro	Asp	Gly	Ile	Ser
			65						70					75
Thr	Asn	Thr	Arg	Leu	Leu	Asn	Leu	His	Glu	Asn	Gln	Ile	Gln	Ile
			80						85					90
Ile	Lys	Val	Asn	Ser	Phe	Lys	His	Leu	Arg	His	Leu	Glu	Ile	Leu
			95						100					105
Gln	Leu	Ser	Arg	Asn	His	Ile	Arg	Thr	Ile	Glu	Ile	Gly	Ala	Phe
			110						115					120
Asn	Gly	Leu	Ala	Asn	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Arg
			125						130					135
Leu	Thr	Thr	Ile	Pro	Asn	Gly	Ala	Phe	Val	Tyr	Leu	Ser	Lys	Leu
			140						145					150
Lys	Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser
			155						160					165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	170	175	180
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	185	190	195
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	200	205	210
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	215	220	225
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	230	235	240
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	245	250	255
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	260	265	270
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	275	280	285
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	290	295	300
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	305	310	315
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	320	325	330
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	335	340	345
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	350	355	360
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	365	370	375
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	380	385	390
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	395	400	405
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	410	415	420
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	425	430	435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	440	445	450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	455	460	465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	470	475	480



Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro
				485					490					495
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr
				500					505					510
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr
				515					520					525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala
				530					535					540
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His
				545					550					555
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn
				560					565					570
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu
				575					580					585
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser
				590					595					600
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn
				605					610					615
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn
				620					625					630
Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile					
				635					640					

<210> 502  
 <211> 2458  
 <212> DNA  
 <213> Homo Sapien

<400> 502  
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 cgcccgccac atggtgcag ccacctcgcg cgcaccccgga ggcgcgcgcgc 100  
 ccagctcgcc cgaggtccgt cggaggcgcc cggccgcccc ggagccaagc 150  
 agcaactgag cggggaagcg ccgcggtccg gggatcgga tgtccctcct 200  
 ccttctcctc ttgctagttt cctactatgt tggaaccttg gggactcaca 250  
 ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300  
 caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350  
 cgataatgaa gggaaccaa aagtggatgat cacttactcc agtcgtcatg 400  
 tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450  
 aatttcctgg caggagatgc ctccctgcag attgaacctc tgaagcccag 500  
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<210> 503  
<211> 373  
<212> PRT  
<213> Homo Sapien

<400> 503  
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35 40 45  
Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln  
50 55 60  
Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu  
65 70 75  
Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu  
80 85 90  
Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp  
95 100 105  
Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val  
110 115 120  
Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro  
125 130 135  
Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr  
140 145 150  
Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr  
155 160 165  
Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro  
170 175 180  
Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu  
185 190 195  
Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala  
200 205 210  
Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val  
215 220 225

Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly
				230					235					240
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu
				245					250					255
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro
				260					265					270
Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val
				275					280					285
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly
				290					295					300
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln
				305					310					315
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr
				320					325					330
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro
				335					340					345
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro
				350					355					360
Ser	Met	Ile	Pro	Ser	Gln	Ser	Arg	Ala	Phe	Gln	Thr	Val		
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<210> 504  
 <211> 3060  
 <212> DNA  
 <213> Homo Sapien

<400> 504  
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 ctctgtgctg gagtagtgga ttctgccaga agtttgagta tcaactactcc 150  
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgocatgca 200  
 aatttacgct tagtcccgaa gaccagggac cgctggacat cgagtggctg 250  
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 attttacgag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400  
 aatttacaac tgtcagatat tggcacatat cagtgcaaag tgaaaaaagc 450  
 tcctggtggt gcaaataaga agattcatct ggtagttcct gttaagcctt 500  
 caggtgctgag atgttacgtt gatggatctg aagaaattgg aagtgacttt 550  
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 gcaaaaattg tctgactcac agaaaatgcc cacttcatgg ttagcagaaa 650  
 tgacttcato tgttatatct gtaaaaaatg cctctttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgac agtgccctgtt 750  
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 ccattatagg aacttttgctt gctctagcgc tcattgggtct tatcatcttt 850  
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 cgatatcagg gaagatgtgc cacctccaaa gagccgtacg tccactgcca 950  
 gaagctacat cggcagtaat cattcatccc tgggggtccat gtctccttcc 1000  
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 cttaaagtgt ttttaaaaaa agcacaaggc acagagatta gagcagctgt 1250  
 aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300  
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 taacaaatth ttaacttttc atatgcatat tctgatatgt ggtcttttag 1450  
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 ctcaaactat tttttatttg caactacatg atttcacaca attctcttaa 1650  
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<210> 505  
<211> 352  
<212> PRT  
<213> Homo Sapien

<400> 505  
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20 25 30  
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu  
35 40 45  
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser  
50 55 60  
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser  
65 70 75  
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg  
80 85 90  
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile  
95 100 105  
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys  
110 115 120  
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

	125	130	135
Val Val Leu Val	Lys Pro Ser Gly Ala	Arg Cys Tyr Val	Asp Gly
	140	145	150
Ser Glu Glu Ile	Gly Ser Asp Phe Lys	Ile Lys Cys Glu Pro	Lys
	155	160	165
Glu Gly Ser Leu	Pro Leu Gln Tyr Glu	Trp Gln Lys Leu Ser	Asp
	170	175	180
Ser Gln Lys Met	Pro Thr Ser Trp Leu	Ala Glu Met Thr Ser	Ser
	185	190	195
Val Ile Ser Val	Lys Asn Ala Ser Ser	Glu Tyr Ser Gly Thr	Tyr
	200	205	210
Ser Cys Thr Val	Arg Asn Arg Val Gly	Ser Asp Gln Cys Leu	Leu
	215	220	225
Arg Leu Asn Val	Val Pro Pro Ser Asn	Lys Ala Gly Leu Ile	Ala
	230	235	240
Gly Ala Ile Ile	Gly Thr Leu Leu Ala	Leu Ala Leu Ile Gly	Leu
	245	250	255
Ile Ile Phe Cys	Cys Arg Lys Lys Arg	Arg Glu Glu Lys Tyr	Glu
	260	265	270
Lys Glu Val His	His Asp Ile Arg Glu	Asp Val Pro Pro Pro	Lys
	275	280	285
Ser Arg Thr Ser	Thr Ala Arg Ser Tyr	Ile Gly Ser Asn His	Ser
	290	295	300
Ser Leu Gly Ser	Met Ser Pro Ser Asn	Met Glu Gly Tyr Ser	Lys
	305	310	315
Thr Gln Tyr Asn	Gln Val Pro Ser Glu	Asp Phe Glu Arg Thr	Pro
	320	325	330
Gln Ser Pro Thr	Leu Pro Pro Ala Lys	Phe Lys Tyr Pro Tyr	Lys
	335	340	345
Thr Asp Gly Ile	Thr Val Val		
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<210> 506  
 <211> 1705  
 <212> DNA  
 <213> Homo Sapien

<400> 506  
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 ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150  
 ggacaagaca tgactgtgat gaggagctgc tttoGCCaat ttaacaccaa 200  
 gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

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<210> 507  
 <211> 206  
 <212> PRT



<213> Homo Sapien

<400> 507

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			20						25					30	
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln	
				35					40					45	
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln	
				50					55					60	
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala	
				65					70					75	
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg	
				80					85					90	
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser	
				95					100					105	
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val	
				110					115					120	
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys	
				125					130					135	
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln	
				140					145					150	
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser	
				155					160					165	
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu	
				170					175					180	
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile	
				185					190					195	
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu					
				200					205						

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850  
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<210> 509

<211> 177

<212> PRT

<213> Homo Sapien

<400> 509

Met	Lys	Leu	Gln	Cys	Val	Ser	Leu	Trp	Leu	Leu	Gly	Thr	Ile	Leu
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Ile	Leu	Cys	Ser	Val	Asp	Asn	His	Gly	Leu	Arg	Arg	Cys	Leu	Ile
				20					25					30
Ser	Thr	Asp	Met	His	His	Ile	Glu	Glu	Ser	Phe	Gln	Glu	Ile	Lys
				35					40					45
Arg	Ala	Ile	Gln	Ala	Lys	Asp	Thr	Phe	Pro	Asn	Val	Thr	Ile	Leu
				50					55					60
Ser	Thr	Leu	Glu	Thr	Leu	Gln	Ile	Ile	Lys	Pro	Leu	Asp	Val	Cys
				65					70					75
Cys	Val	Thr	Lys	Asn	Leu	Leu	Ala	Phe	Tyr	Val	Asp	Arg	Val	Phe
				80					85					90
Lys	Asp	His	Gln	Glu	Pro	Asn	Pro	Lys	Ile	Leu	Arg	Lys	Ile	Ser
				95					100					105
Ser	Ile	Ala	Asn	Ser	Phe	Leu	Tyr	Met	Gln	Lys	Thr	Leu	Arg	Gln
				110					115					120
Cys	Gln	Glu	Gln	Arg	Gln	Cys	His	Cys	Arg	Gln	Glu	Ala	Thr	Asn
				125					130					135
Ala	Thr	Arg	Val	Ile	His	Asp	Asn	Tyr	Asp	Gln	Leu	Glu	Val	His
				140					145					150
Ala	Ala	Ala	Ile	Lys	Ser	Leu	Gly	Glu	Leu	Asp	Val	Phe	Leu	Ala

155

160

165

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala  
170 175

&lt;210&gt; 510

&lt;211&gt; 996

&lt;212&gt; DNA

&lt;213&gt; Homo Sapien

&lt;400&gt; 510

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&lt;210&gt; 511

&lt;211&gt; 251

&lt;212&gt; PRT

&lt;213&gt; Homo Sapien

&lt;400&gt; 511

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Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
             20             25             30

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Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	
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Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	
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Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	
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His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	
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Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	
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Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	
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Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	
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 <212> DNA  
 <213> Homo Sapien

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 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg  
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 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu  
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 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr  
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 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu  
                  230                 235                 240  
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile  
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Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	275	280	285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	290	295	300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	305	310	315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	320	325	330
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Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	350	355	360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	365	370	375
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Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	395	400	405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	410	415	420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	425	430	435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	440	445	450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	455	460	465
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Gln Thr

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<211> 2284

<212> DNA

<213> Homo Sapien

<400> 514

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<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

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Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu	35	40	45	
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln	50	55	60	
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Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala	80	85	90	
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Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile	110	115	120	
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Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	395	400	405
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	410	415	420
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<211> 332

<212> PRT

<213> Homo Sapien

<400> 517

Met	Arg	Leu	Leu	Val	Leu	Leu	Trp	Gly	Cys	Leu	Leu	Leu	Pro	Gly
1				5				10					15	
Tyr	Glu	Ala	Leu	Glu	Gly	Pro	Glu	Glu	Ile	Ser	Gly	Phe	Glu	Gly
				20				25					30	
Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg	Asp
				35				40					45	
His	Arg	Lys	Tyr	Trp	Cys	Arg	Lys	Gly	Gly	Ile	Leu	Phe	Ser	Arg
				50				55					60	
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Gly	Gln	Glu	Thr	Met	
				65				70					75	

Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	80	85	90
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	95	100	105
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	110	115	120
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	125	130	135
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	140	145	150
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	155	160	165
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	170	175	180
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	185	190	195
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	200	205	210
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	215	220	225
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	230	235	240
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	245	250	255
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	260	265	270
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln	275	280	285
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys	290	295	300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro	305	310	315
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val	320	325	330

Ser Ala

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<211> 24

<212> DNA

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<223> Synthetic oligonucleotide probe

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<223> Synthetic oligonucleotide probe

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<223> Synthetic oligonucleotide probe

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